ENVIRONMENTAL ASSESSEMENT FOR SEVEN ARIZONA NEVADA TOWER CORPORATION COMMUNICATION SITES IN LINCOLN COUNTY, NEVADA

HRC Report No. 5-190-9
BLM Report No. NV-040-06-09

Submitted to
Bureau of Land Management
Ely, Nevada Field Office

On behalf of
Arizona Nevada Tower Corporation
Las Vegas, Nevada

Prepared by:
Jeffrey R. Wedding, Diane L. Winslow,
and Alex L. Heindl

April 2007

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1.0 BACKGROUND INFORMATION

1.1 Introduction

The Mobile phone is one of the most widely used pieces of equipment today. The concept of using hexagonal cells for mobile phone base stations was invented in 1947 by Bell Labs engineers at AT&T and was further developed by Bell Labs during the 1960s. Radiophones have a long and varied history that stretches back to the Second World War when the military started to use radio telephony links and civil services in the 1950s, with hand-held cellular radio devices being available since 1983. Due to their low establishment costs and rapid deployment, mobile phone networks have since spread rapidly throughout the world, outstripping the growth of fixed telephony.

Arizona Nevada Tower Corporation (ANTC) has submitted rights-of-way applications, serialized by the Ely Field Office of the Bureau of Land Management, for seven new communication facilities on Federal lands in Lincoln County, Nevada, to expand cellular phone service within the coverage area along the U.S. Highway 93 corridor through Lincoln County.

1.2 Need for the Proposed Action

Cellular towers are an instrumental part of the system that allows wireless transmission for mobile cellular phones. In order to have consistent uniform coverage of signal service, cell phone providers need an interconnected network of cell towers. The proposed ANTC cellular towers would expand and enhance cell phone service in Lincoln County along the U.S. Highway 93 corridor between Coyote Springs Valley and the town of Pioche, Nevada.

1.3 Relationship to Planning

The proposed project is in conformance with the United States Bureau of Land Management's **Caliente Management Framework Plan** (BLM 1983) and **Approved Caliente Management Framework Plan Amendment and Record of Decision for the Management of the Desert Tortoise Habitat**[1] (BLM 2000), stating:

> "Grant power distribution lines 69kV or less, local telephone, water distribution pipelines and facilities, local fiber optic loops and cable lines outside of designated corridors on a case-by-case basis" (BLM 2000, P. 27).

[1] Lands along the west side of US Highway 93 at the Coyote Springs tower site are considered habitat for the federally listed, *Threatened* desert tortoise (*Gopherus agassizii*).

The proposed project is also consistent with Lincoln county management plans. Lincoln County's **Public Land & Natural Resource Management Plan** (Anonymous 1997) states:

> "The specific goal of this plan is to secure multiple uses of publicly managed lands" (P. 5);

and stipulates the County's support for County-based private enterprise through such statements as:

> "It is the policy of Lincoln County Government to increase any opportunity for local economic development by increasing the amount of available private land within the county" (P. 8).

1.4 Issues

At an August 2006 internal project-scoping meeting during which the proposed action was completely described the following issues were raised:

1) Potential impacts on **special status species**, i.e., **desert tortoise** (*Gopherus agassizii*), a federally-listed (Threatened) species potentially inhabiting project-area lands at the Coyote Springs and Alamo Town sites.

2) Potential impacts on **migratory birds**, various species of which may occupy the project areas during the officially designated 1 May to 15 July critical nesting period or pass through the area during spring and fall migration.

3) Potential impacts of a wind turbine generator on **raptor species** at the Alamo Peak ANTC Site Location.

4) Potential impacts to **archaeological resources**, particularly those at the Hiko Intersection ANTC Site Location.

5) Potential impacts on **range and wild horse populations** at the Hiko Intersection ANTC Site Location.

6) Possible **transmitter frequency conflicts** with military channels at the Burnt Springs ANTC Site Location.

7) Potential of the project to introduce and/or proliferate spread of **noxious weeds**.

8) Potential impacts to local **visual resources**, which could be altered by presence of a cellular tower at all of the locations, but particularly at the Alamo Town and Caliente ANTC Site Locations.

9) Compliance of the EA with **Section 508 of the Rehabilitation Act (29 U.S.C. 794d)**, as amended, and disability accessibility on BLM websites.

2.0 DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

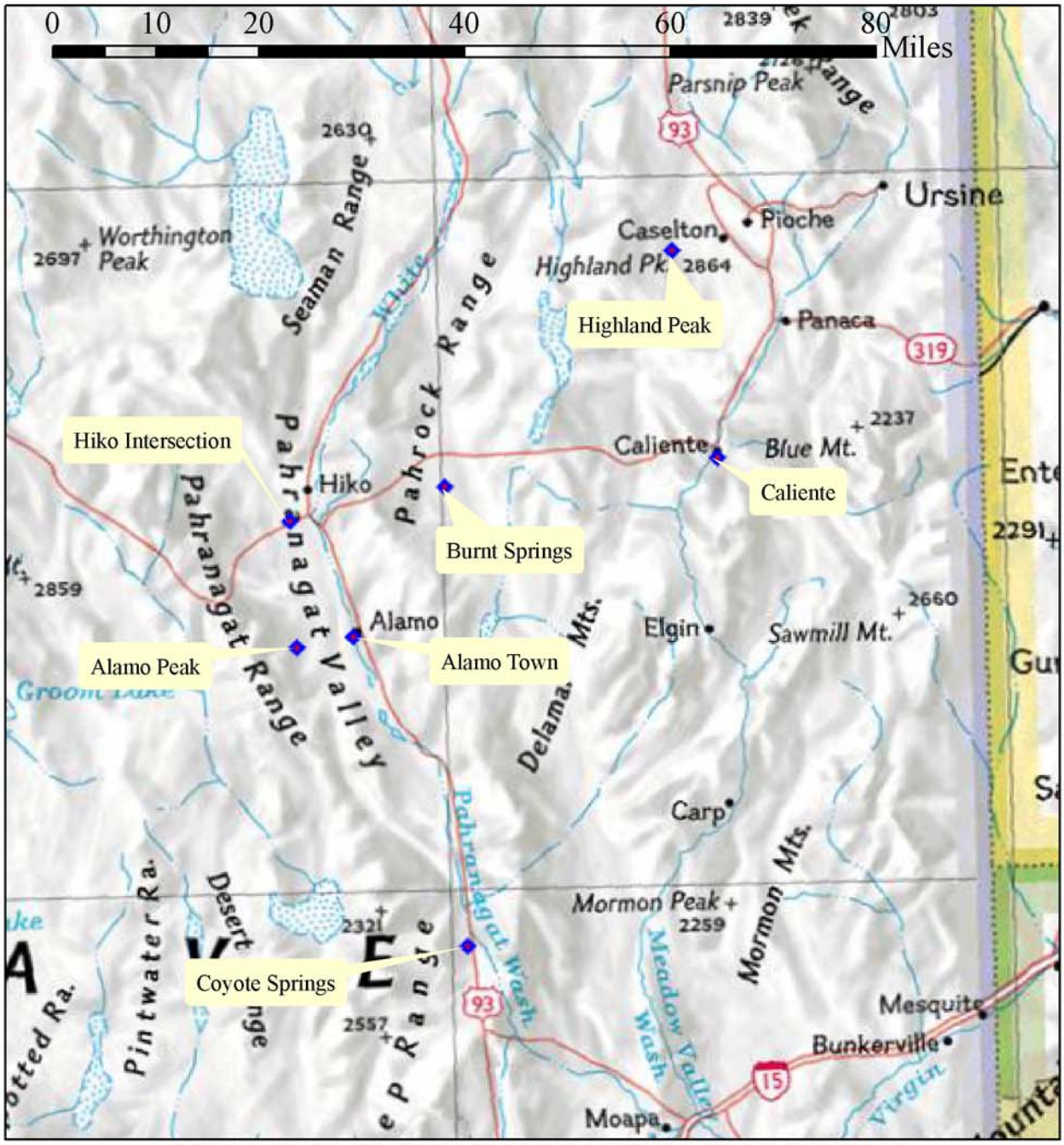
2.1 Proposed Action

ANTC proposes to construct seven new cellular telephone signal relay towers to enhance cell phone service in Lincoln County along the US Highway 93 corridor between Coyote Springs Valley and the town of Pioche (see Maps 1 through 8). Four of the seven proposed construction sites are 100 foot square parcels (see Table 1 on page 12, following Maps 1 through 8). The remaining three are 50 x 100 feet, 50 x 120 feet and 100 x 200 feet. There is exiting road access to each site, but utility corridors would have to be extended at six sites, either above or below ground depending upon distance and terrain, to supply electricity to these sites. Solar cells would be the primary/principal source of power for the remaining site (refer to Table 1 on page 12). The towers would be steel lattice, three-sided (triangular) and free standing (no support wires). Each tower base would consist of a thirty foot-square concrete slab. Towers at the Alamo Peak and Highland Peak sites would be 125 feet high. The remaining towers would be 195 feet high.

2.1.1 Specific ANTC Site Location Descriptions

Alamo Peak ANTC Site Location

Project Description: The proposed structure is for a cellular phone type communication facility located approximately 5.5 miles west of the town of Alamo, Nevada, atop Alamo Peak at an elevation of 6168 feet (refer to Map 2). The right-of-way would consist of a cellular tower site of approximately 10,000 square feet, including a single 125 foot self-supporting lattice tower, equipment building, utility service panels, solar power supply and a back-up wind generator. Because solar energy would be the primary/principal source of power at this site, with wind generation as a back-up, there would be no associated utility corridor (see Photograph 1 on page 12).



HARRY REID CENTER FOR ENVIRONMENTAL STUDIES
DIVISION OF CULTURAL RESOURCES
UNIVERSITY OF NEVADA - LAS VEGAS

Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Map Created with TOPO! Version 4.2.4 (National Geographic)
1:1,000,000

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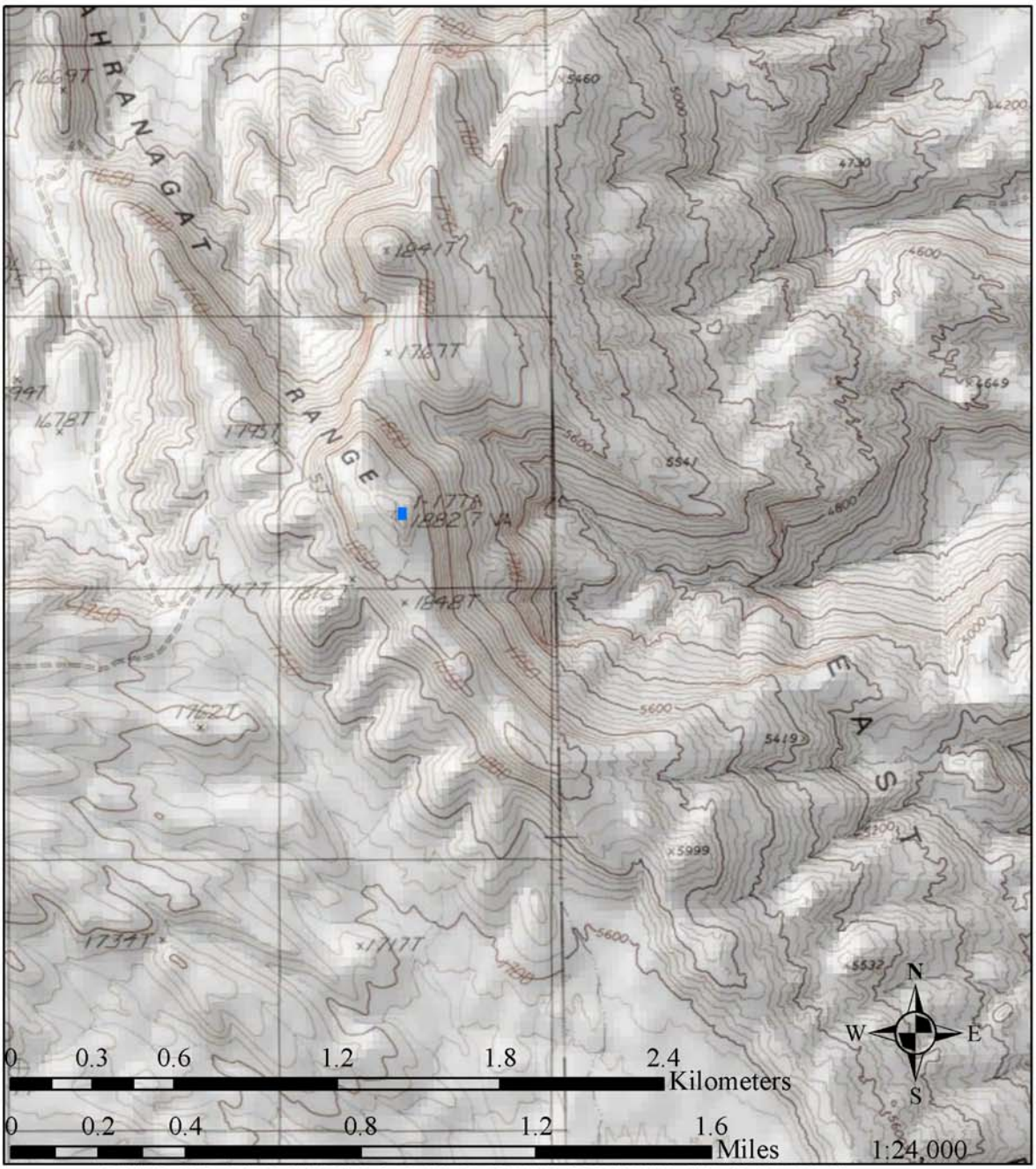
Map 1. General ANTC Site Locations in Lincoln County, Nevada



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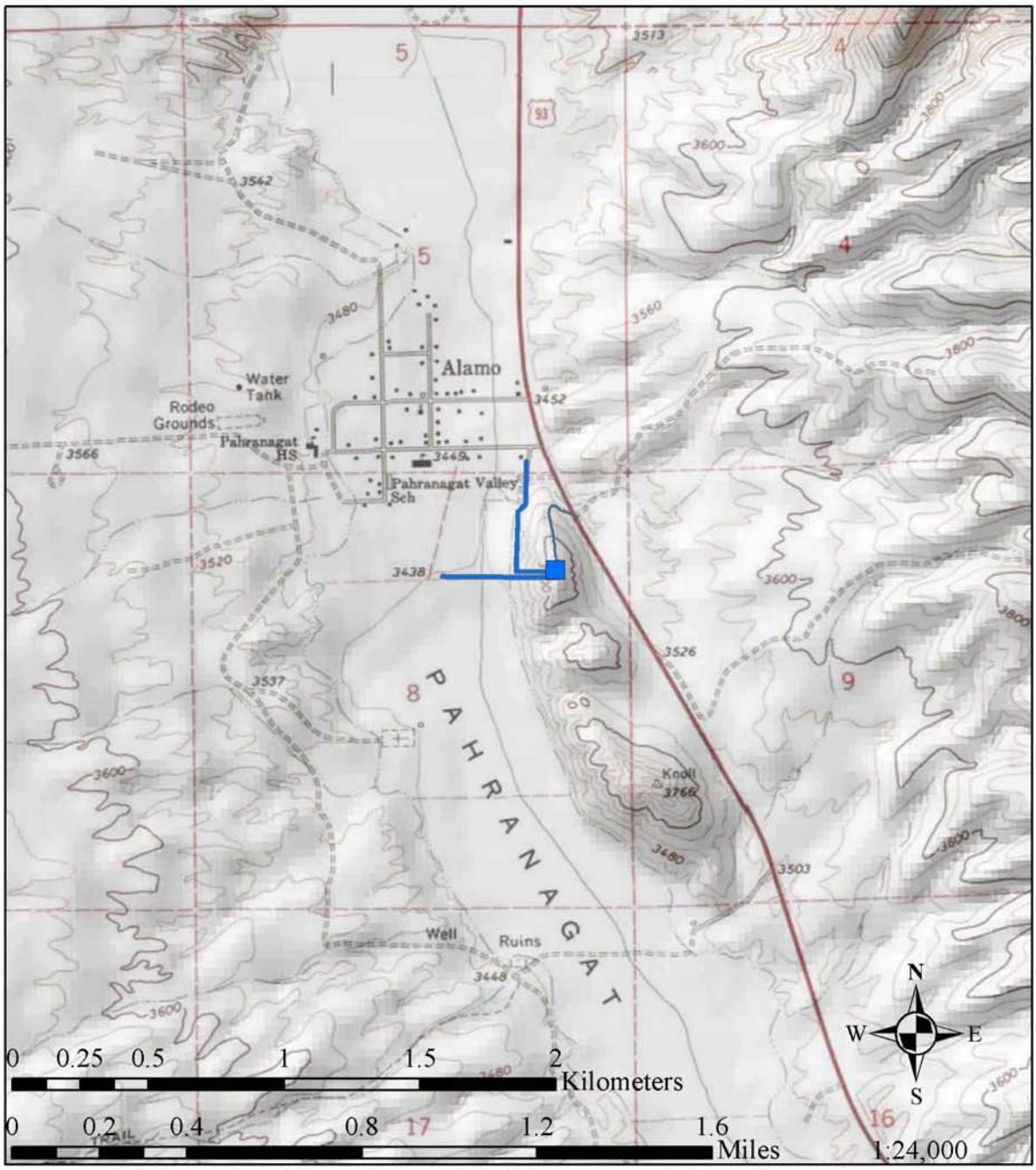
Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Badger Spring, Nev. 1977
(Photorevised 1983)
1:24,000 USGS Topographic Map

Legend

Communication Site

Map 2. Alamo Peak ANTC Site Location



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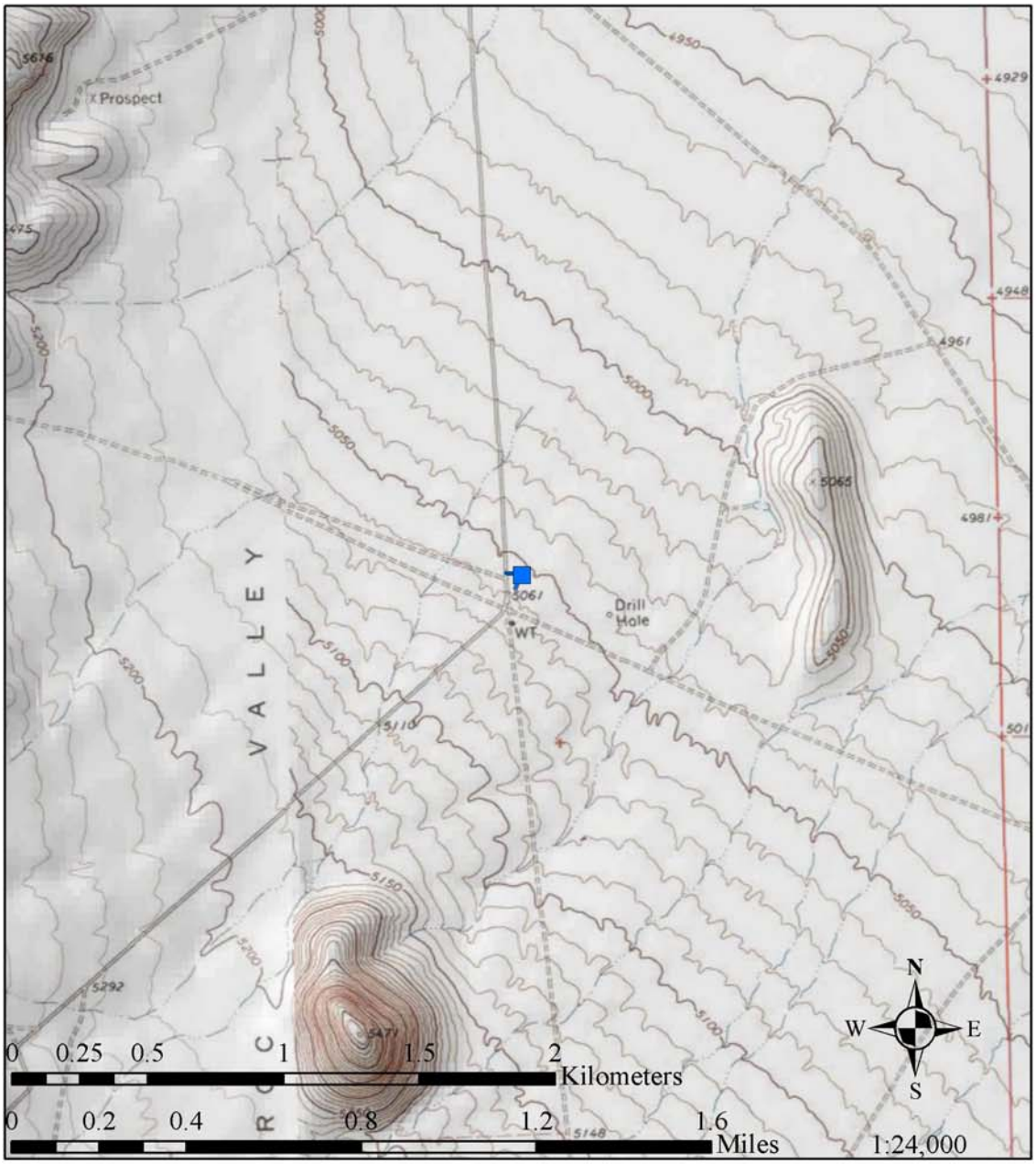
Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Alamo, Nev. 1980
1:24,000 USGS Topographic Map

Legend

Tower Site, Road & Utility Corridor

Map 3. Alamo Town ANTC Site Location



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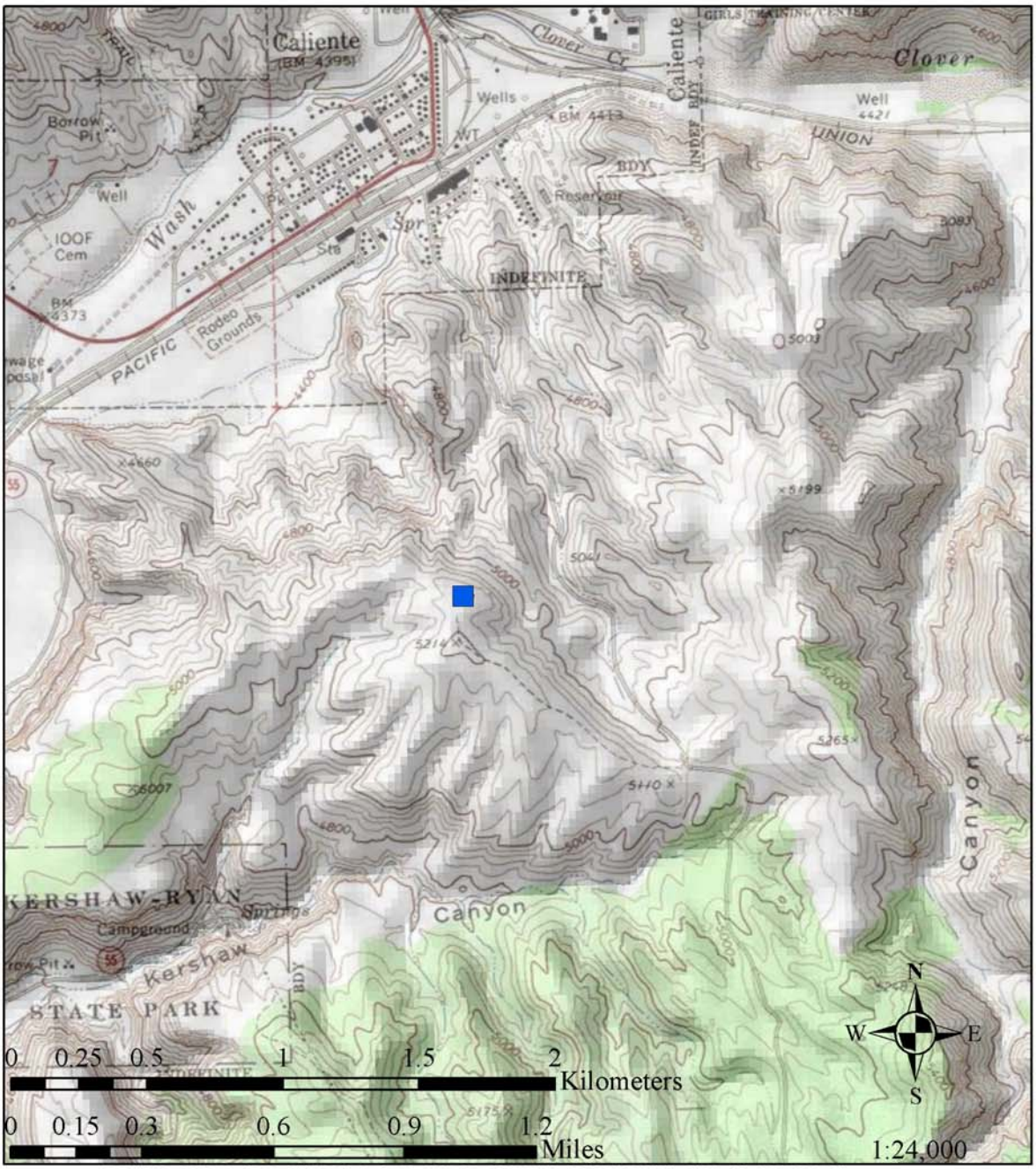
Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Pahroc Summit Pass, Nev. 1970 (Photorevised 1980)
Hiko SE, Nev 1970 (Photorevised 1980)
1:24,000 USGS Topographic Maps

Legend

■ Tower Site, Road & Utility Corridors

Map 4. Burnt Springs ANTC Site Location



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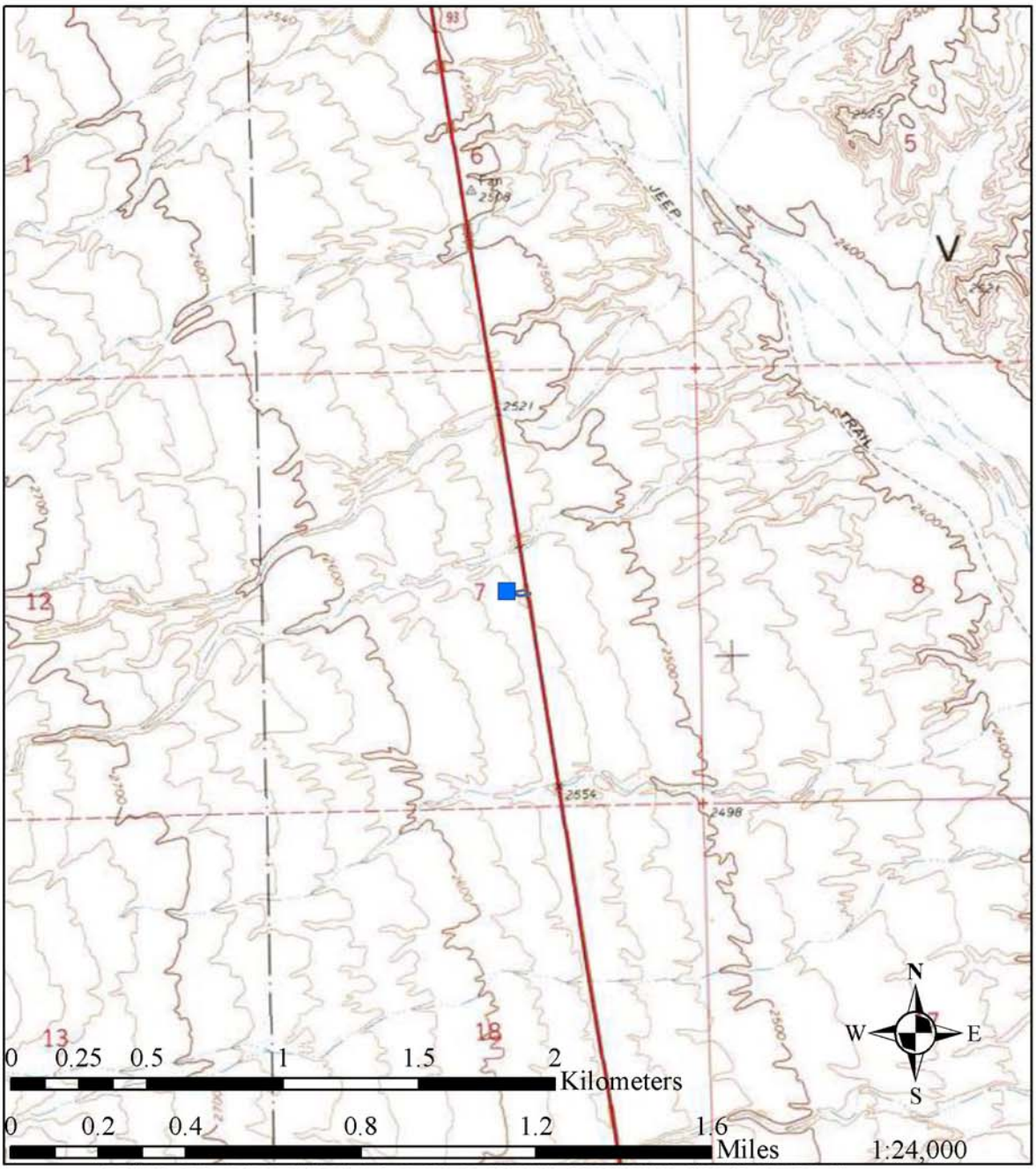
Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Caliente, Nev. 1970
(Photorevised 1980)
1:24,000 USGS Topographic Maps

Legend
Tower Site

Map 5. Caliente ANTC Site Location



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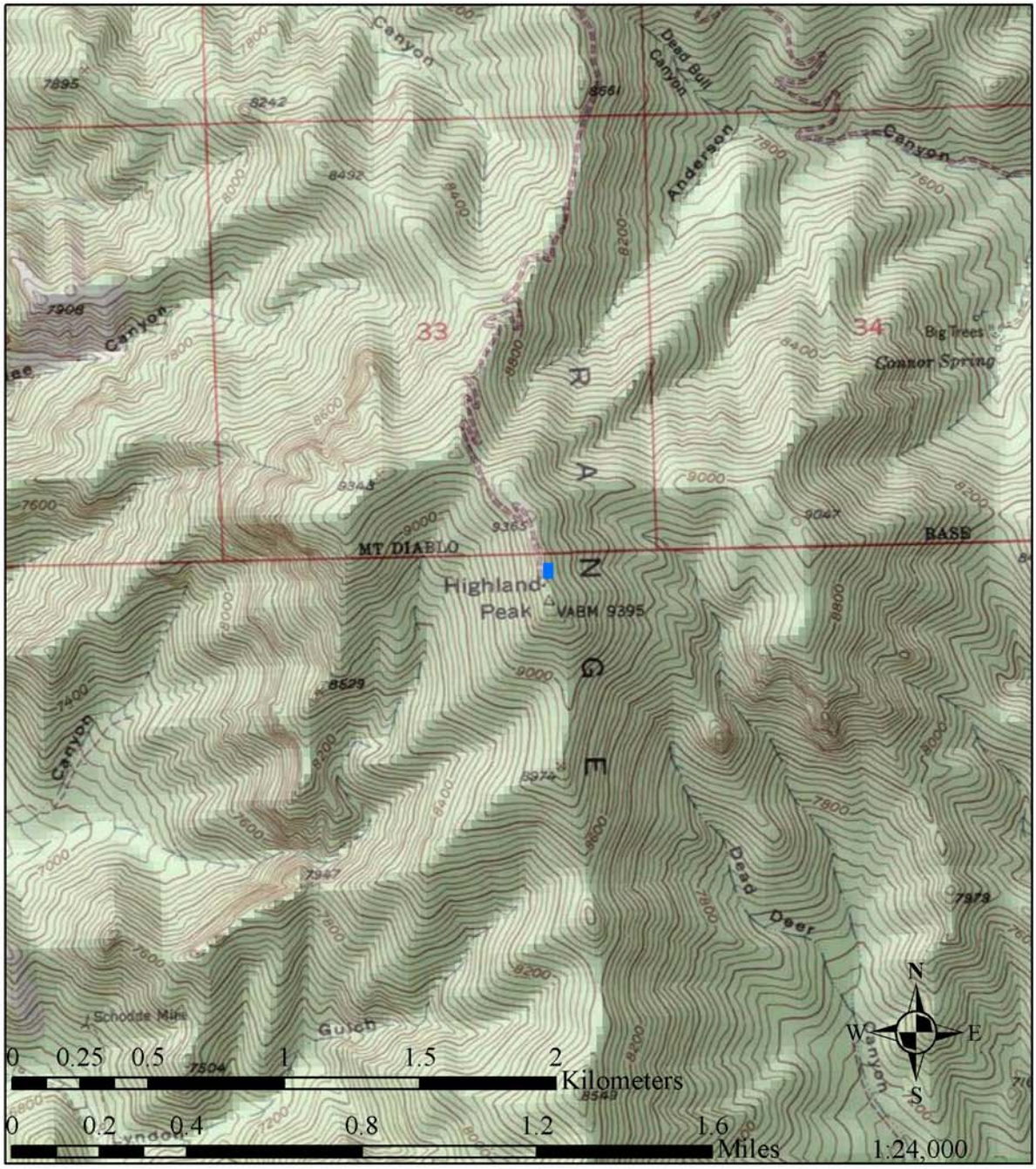
Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Wildcat Wash NW, Nev. 1969
1:24,000 USGS Topographic Map

Legend

Tower Site, Road & Utility Corridor

Map 6. Coyote Springs ANTC Site Location



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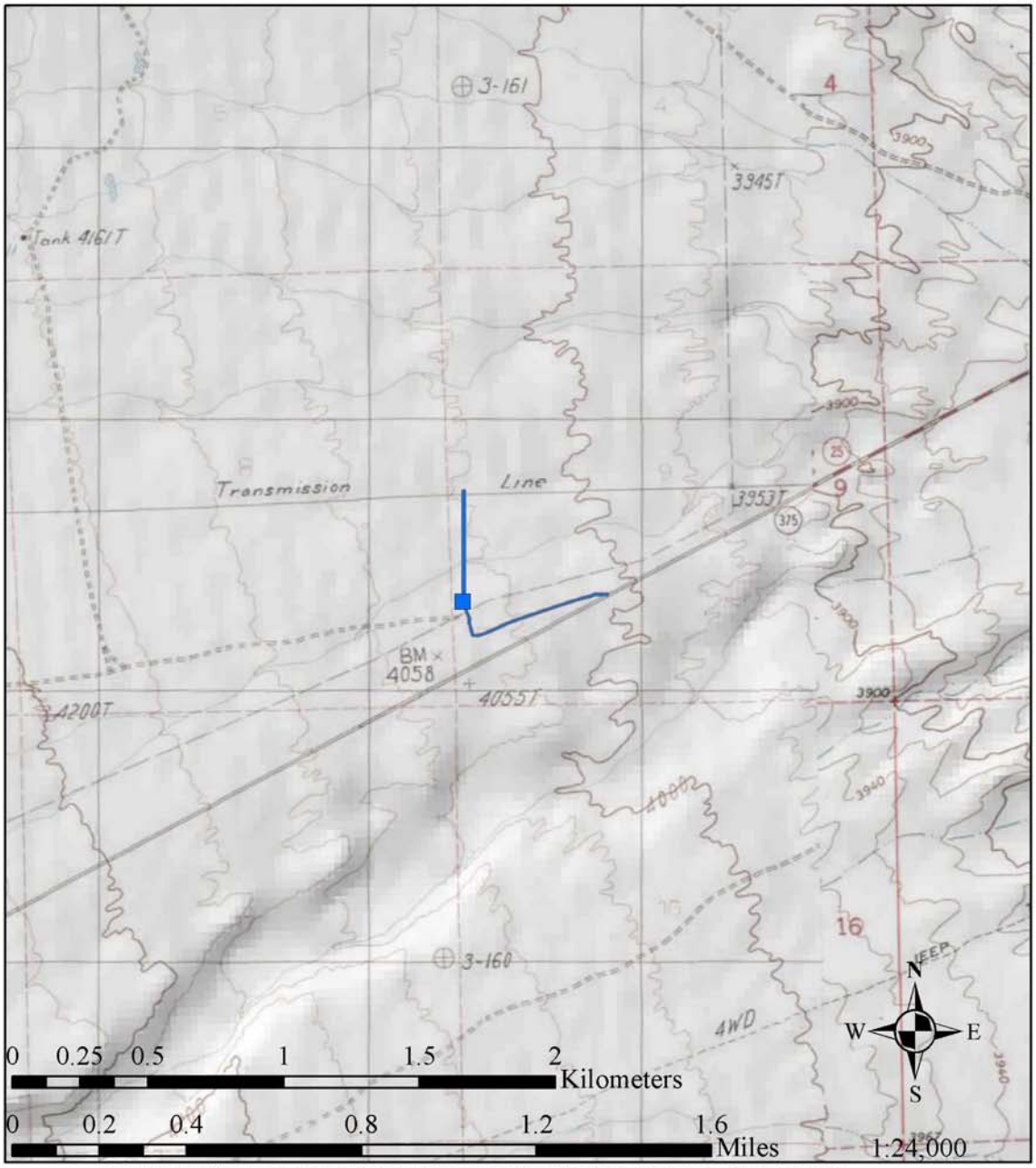
UNIVERSITY OF NEVADA - LAS VEGAS

Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Highland Peak, Nev. 1969
1:24,000 USGS Topographic Map

Legend

Tower Site & Utility Corridor

Map 7. Highland Peak ANTC Site Location



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DIVISION OF CULTURAL RESOURCES

UNIVERSITY OF NEVADA - LAS VEGAS

Project: ANTC Environmental Assessment
County: Lincoln County, Nevada
Quads: Mount Irish SE, Nev. 1981
(Photorevised 1985)
1:24,000 USGS Topographic Map

Legend

■ Tower Site, Road & Utility Corridors

Map 8. Hiko Intersection ANTC Site Location

Table 1. Locations and descriptions of seven cell phone signal relay towers proposed for construction along the US Highway 93 corridor in Lincoln County, Nevada, by ANTC.

Site Name	Location[1]	Tower Site Dimensions	Utility Corridor Dimensions	Access Road Dimensions
Alamo Peak	**Projected* Sec. 16, T7S R60E	50' x 120	None (Solar) No ROW extension needed.	No survey required per BLM
Alamo Town	SW4NE4NE4 Sec. 8, T7S R61E	100' x 100'	3,200' x 50' (new disturbance)	1,600' x 20' (existing access road)
Burnt Springs	**Projected* Sec. 26, T4S R62E	100' x 100'	100' x 50' (new disturbance)	200' x 30' (125' x 30' of existing road, 75' x 30' of new proposed road)
Caliente	**Projected* Sec. 17, T4S R67E	100' x 100'	100' x 50' (new disturbance)	No survey required per BLM
Coyote Springs	NW4NW4SE4 Sec. 7, T12S R63E	100' x 100'	130' x 20' (new disturbance)	150' x 30' (existing access road)
Highland Peak	**Projected* Sec. 3, T1S R66E	100' x 200'	50' x 50' (new disturbance)	No survey required per BLM
Hiko Intersection	NW4SW4SE4 Sec. 8, T5S R60E	100' x 100'	1,320' x 50' (new disturbance)	2,100' x 30' (existing access road)

[1]Relative to Mt. Diablo Base Meridian
*Un-surveyed lands

Photograph 1. Proposed Alamo Peak ANTC cellular phone tower location, Pahranagat Range, Lincoln County, Nevada. View to south.

Site Characteristics: The proposed site is approximately ¼ acre, located at the summit of Alamo Peak adjacent to existing tower sites of various function. Dirt access road(s) accessible from US Highway 93 run on the west side of the proposed site. The site elevation is approximately 6,168 feet is situated on a slight slope.

Tower: The proposed site consists of a single 125 foot Self Supporting lattice tower anchored to concrete footing(s). Overhead and underground cable would run between tower and equipment building(s). Underground lighting protection conductors would be connected to the tower and equipment building, and a 6 foot chain link fence with barb wire strands atop would enclose the tower structure.

Building: An overall completed building dimension should approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) would be placed in phases as required by tower users.

Utilities: Power would be principally supplied from a proposed solar panel to be constructed on site, with a back-up power source in the form of a wind generator. The wind generator would not turn constantly, but set to switch on periodically when needed to supplement the solar panel. The wind turbine would operate on low-light cloudy days, or would run at night to recharge battery power for the following day.

Maintenance Road: Access to the site would be from US Highway 93 via South Richardville and Canyon roads on Alamo, Nevada's northwest side. Currently there is an existing dirt access road approximately 25 feet wide leading to the top of Alamo Peak and proceeding past the west edge of the proposed site.

Alamo Town ANTC Site Location

Project Description: The proposed structure is for a cellular phone type communication facility located on the west side of US Highway 93 approximately 60 miles north of the Interstate 15 and US Highway 93 interchange (refer to Map 3). The right-of-way would consist of a fenced compound of approximately 10,000 square feet, encompassing a single 195 foot self-supporting lattice tower, equipment building(s) and utility service panels. The right-of-way would also include a maintenance road and a utility corridor (see Photograph 2 on next page).

Site Characteristics: The proposed Alamo Town site location is approximately ¼ acre, located some 500 feet west of US Highway 93 and .03 miles south of Broadway Street, Alamo, Nevada. The proposed site sits atop an undisturbed portion of a knoll south of the township of Alamo. An existing water tank (north of proposed site) and an existing small communication facility have previously been erected on the knoll. The knoll has existing access roads from the north and south that traverse the apex of the knoll. Area(s) north, west and south of the proposed site are disturbed and the area east of the site remains undisturbed. The site elevation is approximately 3,645 feet and is situated on an eight degree grade from south to north. The surface of the knob consists mainly of lava strewn rocks and small boulders with little to no surface soil.

Photograph 2. Overview of the proposed Alamo Town ANTC cellular phone tower location, located in the town of Alamo, Lincoln County, Nevada. View to north.

Tower: The site would consist of the following: 1) a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), 2) overhead and underground cable between tower and equipment building(s), 3) underground lighting protection conductors connected to the tower and equipment building, and 4) 6 foot chain link fencing with barb wire strands atop enclosing the site.

Building(s): An overall completed building dimension would occupy approximately 12 feet by 60 feet by 10 feet at full tower. The building(s) would be placed in phases as required by tower users. The building(s) would be situated 5 feet from and parallel to enclosure chain link fencing along the side.

Utilities: Power would be supplied from an existing overhead power line located north and west of the proposed site, and situated at the base of the knoll. The site power service would be supplied overhead and traverse up the west side of the knoll to its termination at the site then underground or overhead as may be determined by the supplying utility or local building code.

Maintenance Road: Currently there is an existing dirt access road approximately 25 feet wide leading from U.S. Highway 93 from the south in a northerly direction, and traversing the apex of the knoll west of the proposed site.

Burnt Springs ANTC Site Location

Project Description: The proposed structure is for a cellular phone type communication facility located approximately 3.25 miles south of US Highway 93. The proposed site is approximately 14 miles east of intersection US Highway 93 and State Highway(s) 375 and 318 (refer to Map 4). The right-of-way would consist of the following: 1) a fenced compound of approximately 10,000 square feet, 2) a single 195 foot self-supporting lattice tower, 3) equipment building and 4) utility service panels. The right-of-way would also include 5) maintenance road(s) and 6) utility corridor(s), (see Photograph 3).

Photograph 3. Proposed Burnt Springs ANTC cellular phone tower location, east of the South Pahroc Range, Lincoln County, Nevada. View to west.

Site Characteristics: The proposed Burnt Springs tower site is approximately ¼ acre, located some 3.25 miles south of US Highway 93 in an undisturbed area. The vicinity south of the proposed site has a stock corral equipped with a loading chute and barbed wire fencing and remains disturbed from livestock movement and dirt access road to service the livestock and access to grazing. Wooden power poles associated with an overhead transmission line run in an east to west direction abutting the south edge of the proposed site (operational). Dirt access road(s) accessible from US Highway 93 are local on the west side of the proposed site. The proposed tower site is situated on a flat area, at approximately 5,050 feet elevation.

Tower: The site would consist of the following: 1) a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), 2) overhead and underground cable between tower and 3) equipment building(s), underground lighting protection conductors connected to tower and 4) equipment building, and 6 foot chain link fencing with barb wire strands atop enclosing site.

Building: An overall completed building dimension would encompass approximately 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) would be placed on site as required by tower users. The building(s) would be situated 5 feet from and parallel to enclosure chain link fencing along the side.

Utilities: Power would be supplied from an existing overhead power line which abuts the site on the south side. The site power service would be supplied overhead utilizing existing or new maintenance road(s). Power service would terminate at the site then connect overhead or underground as may be determined by the supplying utility or local building code.

Maintenance Road: Currently there is an existing dirt access road approximately 25 feet wide leading from the highway and proceeding past the west edge of the proposed site.

Caliente ANTC Site Location

Project Description: The proposed structure is for a cellular phone type communication facility located on a plateau to the south of, and overlooking the Township of Caliente. The proposed site is approximately .9 tenths of a mile south and 750 feet above the Township of Caliente, (refer to Map 5). The right-of-way would consist of the following: 1) a fenced compound of approximately 10,000 square feet, encompassing, 2) a single 195 foot self-supporting lattice tower, 3) equipment building and 4) utility service panels. The right-of-way would also include 5) maintenance road(s) and 6) utility corridor(s)(see Photograph 4).

Photograph 4. Proposed Caliente ANTC cellular phone tower location, Caliente, Lincoln County, Nevada. View to north.

Site Characteristics: The proposed Caliente location is approximately ¼ acre, located approximately .9 tenths of a mile south of US Highway 93 on a disturbed area. The vicinity north of the proposed site has an existing communication tower, power poles and land line telephone communication facilities. The areas east, west and south of the proposed site is high desert chaparral and has domestic litter and other indications of public use. The proposed cell tower site is situated on a slight grade at approximately 5,170 feet in elevation. The site is not observable from the township or highway. The proposed site is located south and east of the existing tower communication site.

Tower: The site would consist of the following: 1) a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), 2) overhead and underground cable between tower and equipment building(s), 3) underground lighting protection conductors connected to tower and 4) equipment building, and 5) 6 foot chain link fencing with barb wire strands atop enclosing site.

Building: An overall completed building dimension would encompass approximately 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) would be placed as required by tower users. The building(s) would be situated 5 feet from and parallel to enclosure chain link fencing along the side.

Utilities: Power would be supplied from an existing overhead power line located approximately 100 feet away from the proposed site. The proposed cell tower site power service would be supplied overhead utilizing existing or new maintenance road(s) and terminating at the site then connected overhead or underground as may be determined by the supplying utility or local building code.

Maintenance Road: Currently there is an existing dirt access road approximately 25 feet wide leading from the Township of Caliente and proceeding up a canyon directly to the plateau and the proposed site.

Coyote Springs ANTC Site Location

Project Description: The proposed structure is for a cellular phone type communication facility located on the west side of US Highway 93 approximately 30 miles north of the Interstate 15 and US Highway 93 interchange (refer to Map 6). The right-of-way would consist of the following: 1) a fenced compound of approximately 10,000 square feet, encompassing 2) a single 195 foot self-supporting lattice tower, 3) equipment building(s) and 4) utility service panels. The right-of-way would also include 5) a maintenance road and 6) a utility corridor (see Photograph 5 on next page).

Photograph 5. Overview of the proposed Coyote Springs ANTC cellular phone tower location, located in Coyote Springs Valley, Lincoln County, Nevada. View is to the west from US Highway 93.

Site Characteristics: The proposed Coyote Springs site is approximately ¼ acre, located some 400 feet west of US Highway 93 in an area previously graded and disturbed. The vicinity around the proposed site remains undisturbed other than the existing wood pole tower (Lincoln County Telephone), double wooden power poles associated with an overhead transmission line running parallel to US Highway 93 (operational) and an existing dirt access road. The site elevation is approximately 2,545 feet and the proposed site is situated on a level area with a limestone mix surface with occasional small boulders and caliche.

Tower: The site would consist of the following: 1)a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), 2) overhead and underground cable between tower and equipment building(s), 3) underground lighting protection conductors connected to tower and 4) equipment building, and 5) 6 foot chain link fencing with barb wire strands atop enclosing site.

Building: An overall completed building dimension would encompass approximately 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) would be placed as required by tower users. The building(s) would be situated 5 feet from and parallel to enclosure chain link fencing along the side.

Utilities: Power would be supplied from an existing overhead power line located east of the proposed site and paralleling US Highway 93. The site power service will be supplied

underground or overhead from the existing overhead line utilizing existing or new maintenance road(s) as may be determined by the supplying utility or local building code.

Maintenance Road: Currently there is an existing dirt access road approximately 25 feet wide leading from the highway and ending at the south eastern corner of the proposed site.

Highland Peak ANTC Site Location

Project Description: The right-of-way would consist of a cellular tower site of approximately 10,000 square feet, including a single 125 foot self-supporting lattice tower, equipment building and utility service panels (refer to Map 7). The right-of-way will also include an existing maintenance road(s) and utility corridor(s) (see Photograph 6).

Photograph 6. Proposed Highland Peak ANTC cellular phone tower location, Highland Range, Lincoln County, Nevada. View to north.

Site Characteristics: The proposed Highland Peak location is approximately ¼ acre. The site, situated just below the 9,397 foot summit of the Highland Range, is situated along the southeast slope and just below the access road. Numerous other utilities have been installed and include the following: an assortment of towers and associated service buildings along this same ridge.

Tower: The site would consist of: 1) a single 125 foot Self Supporting lattice tower anchored to concrete footing(s), 2) overhead and underground cable between tower and equipment building(s), 3) underground lighting protection conductors connected to the

tower and equipment building, and 4) a 6 foot chain link fence with barb wire strands atop would enclose the tower structure.

Building: An overall completed building dimension would encompass approximately 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) would be placed as required by tower users.

Utilities: Power would be supplied from an existing power line located approximately 50 feet away from the proposed site. The site power service would be supplied overhead utilizing existing or new maintenance road(s) and terminating at the site then connected overhead or underground as may be determined by the supplying utility or local building code.

Maintenance Road: Currently there is an existing dirt access road approximately 25 feet wide winding upward from State Route 320, west of Pioche, in a series of tightening switchbacks.

Hiko Intersection ANTC Site Location

Project Description: The proposed structure is for a cellular phone type communication facility located on the north side of State Highway 375 approximately 2.5 miles west of US Highway 93 and State Highway 375 and 318 intersections. The proposed site is approximately 15 miles north of the Township of Alamo, (refer to Map 8). The right-of-way would consist of the following: 1) a fenced compound of approximately 10,000 square feet, encompassing 2) a single 195 foot self-supporting lattice tower, 3) equipment building and 4) utility service panels. The right-of-way would also include 5) maintenance road(s) and 6) utility corridor(s), (see Photograph 7 on next page).

Site Characteristics: The proposed Hiko location is approximately ¼ acre, located approximately .17 of a mile north of State Highway 375 in an undisturbed area. The vicinity south of the proposed site has a stock corral equipped with a loading chute and barbed wire fencing and remains disturbed from livestock movement and dirt access road to service the livestock and access to grazing. Wooden power poles associated with an overhead transmission line running parallel to State Highway 375 (operational) and north of the proposed site, dirt access road(s) accessed from State Highway 375 running parallel and away from State Highway 375 remain. The site elevation is approximately 4,055 feet and the proposed site is situated on a flat area. The corral is observable from the highway. The proposed site is located north and west of the corral.

Tower: The site would consist of the following: 1) a single 195 foot self supporting lattice tower anchored to concrete footing(s), 2) overhead and underground cable between tower and equipment building(s), 3) underground lighting protection conductors connected to tower and equipment building, and 4) 6 foot chain link fencing with barb wire strands atop enclosing site.

Photograph 7. Proposed Hiko Intersection ANTC cellular phone tower location near Hiko, Lincoln County, Nevada. View to southeast.

Building: An overall completed building dimension would encompass approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) will be placed as required by tower users. The building(s) would be situated 5 feet from and parallel to enclosure chain link fencing along the side.

Utilities: Power would be supplied from an existing overhead power line located approximately .25 miles north of the proposed site and paralleling State Highway 375. The site power service would be supplied overhead utilizing existing or new maintenance road(s) and terminating at the site then run overhead or underground as may be determined by the supplying utility or local building code.

Maintenance Road: Currently there is an existing dirt access road approximately 25 feet wide leading from the highway and proceeding past the south edge of the proposed site.

2.1.2 Mitigation

The following mitigation measures are included in the proposed action, and would be taken to reduce potential impacts associated with this project.

The proponent would comply with terms and conditions and standard operating procedures set forth in the Caliente Management Framework Plan Amendment and Record of Decision for the Management of Desert Tortoise Habitat (BLM 2000), summarized in the stipulations of the Desert Tortoise Terms and Conditions for Surface Disturbing Activities (Lands and Minerals) attached as Appendix A. Appropriately timed desert tortoise surveys and associated actions would be conducted by qualified personnel

just prior to construction at the Coyote Springs and Alamo Town ANTC site locations. Initial survey results would be submitted to the US Fish and Wildlife Service (agency charged with primary enforcement of the Endangered Species Act) for review and direction. If tower construction occurs during the tortoise' active season (March through October), the site would either: be surveyed by a qualified biologist and then temporarily fenced to exclude tortoise entry, or an approved biologist would be on site during construction to monitor construction activities and prevent tortoise from entering the project site. If temporary fencing is erected the facility site will be routinely inspected and trash or debris will be removed. The removal of trash or debris will minimize attraction of ravens to the site (which can lead to elevated rates of juvenile tortoise moralities). If construction occurs during the tortoise' dormant season (November through February), measures deemed appropriate by the US Fish and Wildlife Service and/or the BLM would be implemented as necessary.

BLM (and, by default, Federal Aviation Administration) stipulations regarding tower and ancillary building lighting would be followed. Generally, lighting would be the minimum required to meet project-associated safety concerns. Military tower lighting requirements may supersede BLM requirements.

Required removal, temporary storage and replanting of protected plant species (i.e., cactus and yuccas) would be done by appropriately skilled personnel.

The construction zone would be watered as needed to control dust. Water would not be obtained directly from naturally occurring regional sources (e.g., Ash or Crystal springs) harboring protected fish species.

To reduce the risk of introducing or spreading noxious and invasive weeds, all equipment used on the project will be washed with a pressure washer prior to entering the project area to remove any dirt and seed. If any noxious weed infestations are observed on-site prior to construction, every effort will be made to avoid disturbing the population. Any noxious weed patches that occur in the project area as a result of project operations will be eradicated. The project area will be monitored for noxious weeds for three consecutive years following the project operations.

To reduce any potential visual impacts, the following measures apply to all of the proposed ANTC tower locations:

1. Towers should be grey/silver in color to blend with surrounding landscape. The Alamo Town location can alternately be painted a tan color to match the existing water tank situated on the knoll.

2. Minimize new surface disturbances to avoid large open contrasting areas adjacent to undisturbed areas.

3. Equipment buildings should be tan to medium brown in color to blend with mid-ground and background colors.

2.1.3 Monitoring

The following monitoring is included in the proposed action:

- A BLM appointed inspector would be present during construction to assure contract stipulations are met.

- A desert tortoise monitor would be present while construction occurs at the Coyote Springs and Alamo Town ANTC site locations if construction occurs outside of the tortoise' dormant season.

- If required by the BLM, a BLM approved archaeological monitor (funded by the project proponent) would be present during construction at any, or all of the tower locations to reduce any likelihood of entry onto and damage to these locations.

- One or more archaeological monitors would be on-site during construction activities at the Hiko Intersection ANTC site location.

2.2 Alternatives

Because line-of-sight transmission paths are necessary between towers, the option to shift a tower to different locales is severely limited. As such, the only alternative to the proposed location of any tower is a no action alternative.

2.2.1 No Action Alternative

Under the No Action Alternative the proposed actions would not occur on public lands managed by the Ely Field Office.

3.0 DESCRIPTION OF THE AFFECTED ENVIRONMENT

3.1 Introduction

The proposed cellular telephone tower site locations occur throughout Lincoln County, generally situated along the US Highway 93 corridor between Coyote Springs Valley and the town of Pioche. For specific site location information refer back to the specific ANTC site location descriptions provided in Section II.

3.1.1 Critical Elements of the Human Environment

The Critical Elements of the Human Environment, which must be considered because of requirements specified in statute, regulation, or executive order, are listed in Table 2. Elements that may be affected are further described in this EA. Those elements that are not present or would not be affected are also listed in Table 2, but will not be considered further in this document.

Table 2. Critical elements of the human environment.

Critical Element	Not Present	Present But Not Affected	Present and May Be Affected	Rationale
Air Quality		X		Transitory inconsequential impacts to air quality would result from increased dust and vehicle/equipment exhaust fumes, water spraying during project operations would reduce project-associated dust
Areas of Critical Environmental Concern	X			None of the project areas are within an Area of Environmental Concern
Cultural Resources			X	Cultural resource sites have been identified and values would need to be recovered through the implementation of a data recovery treatment plan
Environmental Justice	X			No minority or low-income groups would be disproportionately affected
Floodplains	X			Floodplains are not present in the project areas
Hazardous Wastes	X			Hazardous wastes are not expected, ANTC recognizes that any spill of hazardous waste (e.g. vehicle fuel or oil leaks) must be immediately cleaned and reported
Invasive, Non-Native Species			X	Surface disturbance may spread invasive weeds
Migratory Birds			X	Tower sites lie within migration corridors but towers are designed to minimize intrusion; project construction would not occur during nesting periods
Native American Religious Concerns	X			No conflicts were identified during BLM consultations
Prime or Unique Farmlands	X			Farmlands are not present at the proposed tower sites
Solid Wastes	X			The project would generate small amounts of solid waste (e.g., tower, building, and fence construction debris); however, all project-generated solid waste would be disposed of properly

Critical Element	Not Present	Present But Not Affected	Present and May Be Affected	Rationale
Special Status Species			X	Listed and other sensitive species could be subject to direct and indirect mortalities from contact with project construction equipment and activities, maintenance equipment and presence of tower(s) facilities
Water Quality (drinking or ground)	X			No effects to water quality are expected
Wetlands/Riparian Zones	X			There are no flowing or static surface water features in the project areas
Wild and Scenic Rivers	X			There are no rivers in the project areas
Wild Horses			X	Wild horses may be temporarily displaced during construction
Wildlife			X	Project construction would have the potential to disturb, injure or kill individuals of numerous wildlife species
Wilderness	X			No Wilderness Areas are present at any of the project areas

In addition to the Critical Elements of the Human Environment, the BLM considers other resources and uses that occur on public lands and the issues that may result from the implementation of the proposed action. The potential resources and uses, or non-critical elements that may be affected are listed in Table 3. A brief rationale for either considering or not considering the non-critical element further is provided. The non-critical elements that are considered in the EA are described in the Affected Environment section, and are analyzed in the Environmental Consequences section.

Table 3. Other non-critical resources and uses.

Resource or Issue	Not Present	Present But Not Affected	Present and May Be Affected	Rationale
Soils			X	Proposed action construction would cause localized surface disturbance
Range/Livestock Grazing		X		Tower construction and operation would not affected livestock management operations
Recreation		X		Recreation would not be affected by the proposed action
Vegetation			X	Localized trampling of vegetation would occur due to proposed construction
Visual Resource Management			X	The proposed action would change the existing character of the landscape

3.1.2 Potentially Affected Elements of the Human Environment

ANTC and its consultants met with Ely Field Office BLM staff for a project-scoping meeting in August 2006. Based on the review of existing baseline data and surveys conducted in preparation of this EA, the following have been identified by BLM specialists as potentially affected elements of the human environment:

- Cultural Resources
- Invasive, Non-Native Species
- Migratory Birds
- Soils
- Special Status Species
- Vegetation
- Visual Resource Management
- Wild Horses
- Wildlife

3.2 Cultural Resources (Archaeology and Historic Preservation)

In May 2006, archaeologists from the Division of Cultural Resources at the Harry Reid Center for Environmental Studies (HRC), University of Nevada, Las Vegas, conducted BLM Class III Intensive Pedestrian Inventories at six of the proposed cell tower sites. Survey results are reported in Riddle and Smith (2006), Smith and Riddle (2006a), Smith and Riddle (2006b), Riddle and Smith (2006b), Smith and Riddle (2006c), and Riddle and Smith (2006c). The Caliente site location was examined by BLM archaeologists from the Ely Field Office, the results of which are reported in Gilbert (2006).

Prior to conducting the BLM Class III surveys of the ANTC sites, both BLM archaeologists and HRC archaeologists conducted archival record searches of the proposed communication sites for previously conducted surveys and existing cultural resources within a one-mile radius of the ANTC site locations. Records on file at the Southern Nevada Archaeological Archive located at the University of Nevada, Las Vegas, Harry Reid Center for Environmental Studies, and the BLM were utilized for the purposes of the records search. The archival review found that cultural resource surveys have been conducted within the one-mile radius of all ANTC sites, at various points in time. Various types of cultural resource sites were found to have been identified within a one-mile radius of all communication sites, with the exception of the Alamo Town and Highland Peak sites where no cultural resources had been previously identified. With this knowledge archaeologists were able to formulate potential cultural resource expectations for each of the ANTC site prior to the field surveys. Those expectations are summarized below for each of the ANTC sites.

3.2.1 Survey Expectations

Alamo Peak

The proposed Alamo Peak site is located at the summit of Alamo Peak adjacent to existing tower sites of various function, solar panels and wind generators. Dirt access road(s) accessible for US Highway 93 run on the west side of the proposed site. Although a prehistoric petroglyph and artifact scatter site (26LN3948b) had been previously reported within a one-mile radius of the proposed ANTC site, no cultural resources had been reported within the current project boundary. As such, archaeologists anticipated that the survey would be negative for cultural resources due to the previously disturbed nature of the proposed site.

Alamo Town

The proposed site sits atop an undisturbed portion of a knoll south of the township of Alamo. An existing water tank and small communication facility have previously been erected on the knoll. The knoll has existing access roads from the north and south which traverse the apex of the knoll. Area(s) north, west and south of the proposed site are disturbed and the area east of the site remains undisturbed. The surface of the knob consists mainly of lava strewn rocks and small boulders with little or no surface soil. The archival records review found that no cultural resource sites had been previously recorded within a one-mile radius of the proposed Alamo Town site and given the partially disturbed nature of the proposed site, archaeologists anticipated that the survey would be negative for cultural resources.

Burnt Springs

The proposed Burnt Springs site is located some 3.25 miles south of US Highway 93 in an undisturbed area. The vicinity south of the proposed site has a stock corral equipped with a loading chute and barbed wire fencing. The area is disturbed by livestock movement and grazing, and utilization of the dirt access road to service the livestock. Wooden poles associated with an overhead transmission line run in an east to west direction abutting the south edge of the proposed site (operational). The archival records search revealed that two historic period sites had been previously reported within one-mile of the proposed site. Site 26LN3647 is a historic period camp site (26LN3647) and site 26LN3648 is a historic period wagon/auto road (26LN3648). No cultural resource sites have been previously reported within the proposed ANTC site. HRC archaeologists anticipated that historic period artifacts or features might be encountered.

Caliente

The proposed Caliente site location is located some .9 tenths of a mile south of US Highway 93 on a disturbed area. The vicinity north of the proposed site has an existing communication tower, power poles and land line telephone communication facilities. The areas east, west and south of the proposed site is high desert chaparral and has domestic litter and other indications of public use. The archival records search revealed that five cultural resource sites had been previously recorded within approximately one mile of the proposed ANTC site. Cultural resource sites consist of a rockshelter with ceramics (26LN3446), a ceramic and lithic scatter (26LN101), a rockshelter with associated

artifacts (26LN102), a historic period isolate of purple glass (26LN3445), and a historic period trash scatter associated with the Caliente Railroad Depot (26LN4000). No cultural resource sites have been previously reported within the boundary of the proposed ANTC site. BLM archaeologists remarked the following expectations for the survey, "typically patterned movements of prehistoric people did not include long term use of ridge tops, and it is with that knowledge that I anticipate perhaps non-habitation site (although minimal) material at the proposed project area."(Gilbert 2006:2).

Coyote Springs
The proposed Coyote Springs site is located some 400 feet west of US Highway 93 in an area previously graded and disturbed. The vicinity around the proposed site remains undisturbed other than the existing wood pole tower (Lincoln County Telephone - operational), double wooden power poles associated with an overhead transmission line running parallel to US Highway 93 (operational) and an existing dirt access road. The records search found that seven prehistoric sites have been recorded within a one-mile radius of the proposed ANTC site. 26LN2859 is a projectile point, 26LN2860 is a single chert flake and sites 26LN2867, 26LN2868, 26LN2869, 26LN2870, and 26LN2871 are all lithic scatters. HRC archaeologists anticipated the possibility of encountering prehistoric isolated artifacts or lithics scatters.

Highland Peak
The proposed Highland Peak location is situated just below the 9,397 foot summit of the Highland Range, and lies along the Peak's southeast slope and just below the access road. A number of other utilities have previously installed an assortment of towers and associated service buildings along this same ridge. The records review found that no cultural resource sites had been previously recorded within a one-mile radius of the proposed site. Given the previously disturbed nature of the proposed Highland Peak site, coupled with the high elevation, archaeologists anticipated that the survey would be negative for cultural resources.

Hiko Intersection
The proposed Hiko Intersection is located some .17 of a mile north of Sate Highway 375 in an undisturbed area. The vicinity south of the proposed site has a stock corral equipped with a loading chute and barded wire fencing and remains disturbed from livestock movement and grazing. The archival records search revealed that three prehistoric cultural resource sites have been previously identified within one-mile of the proposed site. The sites consist of two lithic scatters (26LN1568 and 26LN4271) and 26LN4270 a lithic scatter/lithic procurement site which had been previously determined to be eligible to the National Register for Historic Places. Based on the data review and visual inspection of the landscape, archaeologists anticipated that lithic scatters, or lithic procurement sites may be encountered during the survey.

The Class III surveys conducted by both BLM archaeologists and HRC archaeologists occurred during the months of February and May 2006. Table 4 (below) provides an overview of survey findings and lists the resulting BLM report numbers for each of the proposed ANTC communication site locations discussed herein. Only one cultural

resource site was identified during the surveys, 26LN1568 a prehistoric lithic quarry identified at the proposed Hiko Intersection site, which met the expectations of the surveying archaeologists. Through consultations with the BLM site 26LN1568 was determined to be eligible for listing to the National Register for Historic Places. Three isolated occurrences were identified: a historic period benchmark at the proposed Hiko Intersection site, and a historic period tobacco tin and split obsidian cobble were recorded at the proposed Burnt Springs site. Isolated occurrences, although recorded during the survey process, are not considered significant and are not eligible for listing on the National Register.

Table 4. Cultural resource report numbers and findings for the ANTC site locations.

BLM Report Number	ANTC Site Location	Findings
8111 NV 04-06-1608A	Alamo Town	No Findings - Negative
8111 NV 04-06-1608B	Coyote Springs	No Findings – Negative
8111 NV 04-06-1608C	Alamo Peak	No Findings – Negative
8111 NV 04-06-1608E	Hiko Intersection	Findings are a prehistoric lithic quarry (site 26LN1568) and an isolated occurrence consisting of a historic period benchmark
8111 NV 04-06-1608F	Burnt Springs	Findings are two isolated occurrences, an historic period tobacco tin and a split obsidian nodule
8111 NV 04-06-1608H	Highland Peak	No Findings - Negative
8111 NV 04-2006-1609	Caliente	No Findings - Negative

3.3 Invasive, Non-Native Species

Invasive, non-native noxious weeds are defined as undesirable, introduced species for which aggressive control methods may be needed to prevent or stop their establishment in a given area. A zero tolerance policy for these weeds is in effect for the proposed project areas. Subsequent to the biological assessment, in December 2006, risk assessments for noxious weeds were completed through the use of the Ely District weed inventory data; are summarized in Table 5, and attached as Appendix D. Field weed surveys were not completed because of the assessments' winter timing.

Table 5. Noxious/invasive weed species known to occur around the project areas summarized from the risk assessments completed for the ANTC tower locations (X denotes the species occurs near a particular tower location).

Noxious/ Invasive Species	Alamo Peak	Alamo Town	Burnt Springs	Caliente	Coyote Springs	Highland Peak	Hiko Intersection
Russian knapweed *Acroptilon repens*				**X**	**X**		
Tree of Heaven *Ailanthus altissima*				**X**			

Noxious/ Invasive Species	Alamo Peak	Alamo Town	Burnt Springs	Caliente	Coyote Springs	Highland Peak	Hiko Intersection
Hoary Cress/Whitetop *Cardaria draba*	**X**	**X**	**X**	**X**			**X**
Bull thistle *Cirsium vulgare*				**X**			
Scotch thistle *Onorpodum acanthium*	**X**	**X**		**X**		**X**	**X**
Perennial pepperweed/Tall whitetop *Lepidium latifolium*	**X**	**X**		**X**			**X**
Salt Cedar *Tamarix Spp.*	**X**	**X**	**X**	**X**	**X**	**X**	**X**
Spotted knapweed *Centaurea maculosa*			**X**			**X**	**X**
Russian thistle/Tumbleweed *Salsola Kali*					**X**		
Cheatgrass/Red Brome/etc. *Bromus*					**X**		
Mediterranean grass *Schismus*					**X**		
Sahara Mustard Brassica tournefortii					**X**		

Noxious weed risk assessments numerically evaluate two factors. Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area. Factor 2 assesses the consequence of noxious weed establishment in the project area. The overall risk rating is obtained by multiplying Factor 1 by Factor 2. The results of the risk assessments for the ANTC tower locations are summarized in Table 6 below.

Table 6. Risk assessments for noxious weeds summarized for the ANTC tower locations.

Site Name	Factor 1	Factor 2	Risk Rating
Alamo Peak	Low (1)	Moderate (4)	Low (4)
Alamo Town	Moderate (5)	Moderate (4)	Moderate (20
Burnt Springs	Low (1)	Moderate (4)	Low (4)
Caliente	Low (3)	Moderate (6)	Moderate (18)
Coyote Springs	Moderate (6)	Moderate (4)	Moderate (24)
Highland Peak	Moderate (7)	Moderate (4)	Moderate (28)
Hiko Intersection	Moderate (4)	Moderate (4)	Moderate (16)

3.4 Migratory Birds

Each of the proposed tower sites lies within flyways routinely used by seasonally migrating birds. During the field surveys conducted to assess project-associated environmental impacts, each site's value as nesting, perching and roosting habitat was considered. None of the sites show indication of other than casual use (e.g., flyovers) by raptors. While numerous ground, brush and tree nesting species could establish nests in these locations, none contain any unusual or unique avian nesting or other use habitats. Similarly, none of these sites contains or borders wetlands or marshes, thus there would be no direct impacts to wetland-obligate nesters.

Presence of the towers would impose added risk (collision) to nocturnally migrating species. Tower lighting would be minimized to reduce attraction to these sites, and the absence of guy wires and other support features would further reduce likelihood of bird collisions and associated mortalities. Finally, if the towers are permitted, construction would not occur during bird nesting season.

Specific Special Status Species of migratory birds likely to utilize the project areas are further discussed in Section 3.6. Additional migratory species are discussed as part of the general wildlife descriptions for each location found in Section 3.10.

3.5 Soils and Topography

The proposed project area is within the Basin and Range Physiographic Province – a section of western North America characterized by north/south trending valleys (basins) flanked by correspondingly oriented mountain blocks (ranges). This, geologically speaking, relatively recent[2] landscape is a result of simultaneous uplifting of mountains and down-dropping of adjacent valleys in response to stresses applied to the continental land mass. Subsequent erosion of the mountain ranges has built large alluvial fans that dip from the mountain margins toward the valley bottoms. These fans' surfaces have themselves been eroded to produce a characteristic array of low, elongate hills, hummocks and benches separated by intervening drainages, all of which lie generally perpendicular to the mountains and valleys they lie between.

Surface soils surrounding the seven site locations range from sandy and clayey loams on the alluvial fans to sands, silty sands and silts in the various drainages and the numerous, small, enclosed basins. Patchy desert pavements of mostly pebbles and small clasts occur irregularly on the stable surfaces of some of the benches on the alluvial fans. Pebbles, cobbles and small boulders, most commonly derived from rhyolitic lavas, quartzites and cherts eroding from the local mountains, are frequently evident in the alluvium. Extensive lava and tuff flows are evident in the Hiko and White River narrows. As each of the proposed site locations have unique topography, detailed descriptions for each of the sites is presented below.

[2] North American Basin and Range topography probably began forming about middle Tertiary time, between 35 and 40 million years ago (Morrison 1965).

3.5.1 Specific ANTC Site Location Topography and Soil Descriptions

Topography and Soils at the Alamo Peak ANTC Site Location

The proposed Alamo Peak ANTC site is situated directly atop Alamo Peak, part of the Pahranagat mountain range, at an elevation of 6,168-feet. Terrain at the proposed site consists of decomposing granitics interspersed with outcrops, boulders and cobbles of similar igneous origin.

Topography and Soils at the Alamo Town ANTC Site Location

The proposed Alamo Town ANTC site is located atop an undisturbed portion of a rhyolite knoll. Area(s) north, west and south of the proposed site are disturbed and the area east of the site remains undisturbed. The site elevation is approximately 3,645 feet and is situated on an eight foot grade from south to north. The surface of the knoll consists mainly of rhyolitic strew rocks and small boulders with little to no surface soil

Topography and Soils at the Burnt Springs ANTC Site Location

The Burnt Springs site elevation is approximately 5,050 feet. Local soil is rather loose and granular and is comprised mostly of clasts and small cobbles of eroded volcanics washing from the South Pahroc Range some two miles to the west. Small obsidian nodules are scattered across the site and surrounding area.

Topography and Soils at the Caliente ANTC Site Location

Elevation at the Caliente site is approximately 5,170 feet and the proposed site is situated on a slight grade. Intact surfaces at the site are covered by coarse, granular soil of volcanic origin interspersed with exposures of the underlying volcanic strata. Boulders, some quite large, are commonplace along edges of the hilltop.

Topography and Soils at the Coyote Springs ANTC Site Location

Situated on the lower middle reaches of a broad alluvial fan that dips eastward from the Sheep Range toward Pahranagat Wash, terrain at the Coyote Springs site is characterized by broad patches of well-developed desert pavement of limestone and mixed chert clasts. Additionally, larger limestone cobbles or small boulders dot the project site. Outcrops of surface caliche are irregularly apparent.

Topography and Soils at the Highland Peak ANTC Site Location

Situated along the summit of the Highland Mountain Range's eastern slope, the proposed site is located within a previously disturbed area at an elevation of approximately 9,397 feet. Terrain at the proposed site is very rocky, moderately steep and consists predominantly of limestone and dolomite.

Topography and Soils at the Hiko Intersection ANTC Site Location

Situated on the toe of a large alluvial fan that falls eastward from the Mt. Irish Range to the ancestral White River channel. At 4,055 feet elevation, the proposed site rests on a stable flat bench within the fan. Large active wash channels several hundred feet to the north and south flank the proposed site. Surface soil consists of loose, sandy, relatively well-sorted alluvia, which contains pebbles, small cobbles and clasts of quartzite, rhyolitic volcanics, limestone, chert and jasper – detritus washed from the complex lithology of the Mt. Irish Range, eight miles to the west.

3.6 Special Status Species

A search of the Nevada Natural Heritage Program database for records of sensitive species within the general[3] project area reveals the possibility of encountering four sensitive plant and one reptile species within three of the proposed project areas. Detailed information about the Special Status Species obtained from the Nevada Natural Heritage Program database is presented in the Biological Assessment prepared for this project (see Appendix C). Additional species identified as sensitive by the BLM, and protected by the state of Nevada, are also known to occur at the proposed tower locations. Table 7 summarizes those special status species which are Threatened, Endangered, Sensitive, and/or State Protected; and which proposed tower location(s) are associated.

Table 7. Sensitive species noted by Nevada Natural Heritage Program and BLM as possibly occurring within the proposed ANTC cellular phone tower sites.

Species	**Status**[1]				**Associated ANTC Site**
	T	**E**	**S**	**SP**	
MAMMALS					
Desert bighorn *Ovis canadensis nelsoni*			X	X	Alamo Peak, Burnt Springs
Pygmy rabbit *Brachylagus idahoensis*			X	X	Caliente
Pallid bat *Antrozous pallidus*			X		All
Townsend's big-eared bat *Corynorhinus townsendi*			X		All
Big brown bat *Eptesicus fuscus*			X		All
Spotted bat *Euderma maculatum*			X	X	All
Silver-haired bat *Lasionycteris noctivigans*			X		All
Hoary bat *Lasiurus cinereus*			X		All
California Myotis *Myotis californicus*			X		All
Long-eared Myotis *M. evotis*			X		All

[3] Searches reveal records of sensitive taxa within any part of each township and range (36 square miles) a project touches. As a result, some accounts include records from outside an actual project area.

Species	Status[1]				Associated ANTC Site
	T	E	S	SP	
Little brown Myotis *M. lucifugus*			X		All
Small footed Myotis *M. subulatus*			X		All
Fringed Myotis *M. thysanodes*			X		All
Yuma Myotis *M. yumanensis*			X		All
Western pipistrelle *Pipistrellus hesperus*			X		All
Mexican free-tailed bat *Tadarida brasiliensis*			X		All
BIRDS					
Golden eagle *Aquila chryseatos*			X	X	All
Bald eagle *Haliaeetus leucocephalus*	X			X	Alamo Town
Ferruginous hawk *Buteo regalis*			X	X	All
Northern goshawk *Accipiter gentilis*			X	X	Alamo Peak, Highland Peak
Prairie falcon *Falco mexicanus*				X	All
Burrowing owl *Athene cunicularia*			X	X	Coyote Springs, Alamo Town, Hiko
Pinyon jay *Gymnorhinus cyanocephalus*			X		Alamo Peak
Loggerhead shrike *Lanius ludovicianus*			X		Coyote Springs, Alamo Town, Hiko, Caliente
Crissal thrasher *Toxostoma crissale*			X		Coyote Springs
Gray vireo *Vireo vincinor*			X		Alamo Peak
Vesper sparrow *Pooecetes gramineus*			X		Caliente, Burnt Springs
REPTILES					
Desert tortoise *Gopherus agasizzii*	X			X	Coyote Springs, Alamo Town
Gila monster *Heloderma suspectum*			X	X	Coyote Springs, Alamo Town
Chuckwalla *Sauromalus obesus*			X		Coyote Springs
PLANTS					
Meadow Valley sandwort *Arenaria stenomeres*			X		Coyote Springs
Long calyx eggvetch *Astragalus oophorus lonchocalyx*			X		Highland Peak
Waxflower (aka Cliffbush) *Jamesia tetrapetala/ americana*			X		Highland Peak
Rosy two-toned beardtongue (aka Bi-colored penstemon) *Penstemon bicolor roseus*			X		Coyote Springs

[1]**T**: Threatened; **E**: Endangered; **S**: Sensitive; **SP**: State protected.

3.7 Vegetation

The seven proposed project locations occur in varied locations across Lincoln County. Individual discussions of the biotic communities at each proposed tower location are provided below.

3.7.1 Specific Vegetation Descriptions for the ANTC Site Locations

Vegetation at the Alamo Peak ANTC Site Location

This site can generally be characterized as pinyon (*Pinus* sp.) / juniper (*Juniperus* sp.) woodland. Overstory vegetation consists of well-spaced single-leaf pinyon pine (*P. monophylla*), juniper (*J. occidentalis*) and antelope bush (*Purshia tridentata*). Plants are typically stunted and wind-sculpted. Big sage (*Artemisia tridentata*), green ephedra (*Ephedra viridis*) and blackbrush (*Coleogyne ramosissima*) dominate the understory. Broom snakeweed (*Gutierrezia sarothrae*), paintbrush (*Castilleja chromosa*) and scattered Mojave prickly pear (aka old man cactus – *Opuntia erinacea*) occur as occasionals.

The local, granitic soils would appear to preclude presence of both the Meadow Valley sandwort (*Arenaria stenomeres*) and long-calyx eggvetch (*Astragalus oophorus lonchocalyx*), sensitive species highlighted in the Nevada Natural Heritage report (Appendix B). Similarly, although the species is unreported from the Pahranagat range, because waxflower aka cliffbush (*Jamesia tetrapetala*) is a recognized component of pinyon/sage habitats elsewhere in Nevada (Kartesz 1988), this site was examined for its presence. This low, thickly branched shrub possesses reasonably distinct identifying characteristics and, if present, is likely to be readily apparent. However, no evidence of it was seen at this site.

Vegetation at the Alamo Town ANTC Site Location

The Alamo Town site lies within the creosote (*Larrea tridentata*) / bursage (*Ambrosia* sp.) ecotone, i.e., the zone of overlap between Mojave Desert and Great Basin vegetative communities. Despite lacking much surface soil the hilltop site supports a diverse array of plant life. Shrubs include creosote bush, white bursage (*A. dumosa*), little-leaf rhatany (*Krameria parvifolia*), joint-fir (*Ephedra nevadensis*), spiny menodora (*Menodora spinescens*), spiny hop sage (*Grayia spinosa*), shadscale (*Atriplex confertifolia*), cheese bush (*Hymenoclea salsola*), paper bag bush (*Salazaria mexicana*) and cottonthorn (*Tetradymia axilaris*). Sub-shrubs include desert marigold (*Baileya multiradiata*), broom snakeweed, desert mallow (*Sphaeralcea ambigua*) and little trumpet (*Eriogonum inflatum*). Big galleta (*Pleuraphis rigida*) is also present, along with numerous Engelmann's hedgehog (*Echinocereus engelmannii*) and, less commonly, beavertail (*Opuntia basilaris*) and cottontop cactus (*Echinocactus polycephalus*). A thick stand of rubber rabbitbrush (*Chrysothamnus nauseosus*) grows on the hill's east side near the water tank's overflow drain.

This site presents no suitable habitat for the four sensitive plant species reported by the Natural Heritage Program. It is well north of the Rosy two-toned beardtongue's (aka Bi-colored penstemon, *Penstemon bicolor roseus*) and Meadow Valley sandwort's known ranges and too low in elevation to host the waxflower (Kartesz 1988). Although the long-calyx egg vetch is known from the Delamar and Clover mountains, east of this site, that species' usual association with calcareous (limestone-based) soils (Kartesz 1988) would seem to preclude its occurrence in this volcanic terrain.

Vegetation at the Burnt Springs ANTC Site Location

Local vegetation clearly situates this site within the Great Basin vegetative community. Little sagebrush (*Artemisia arbuscula*) dominates the landscape, with desert mallow, paintbrush, freckled milk vetch (*Astragalus lentiginosus*) and an unidentified rabbitbrush (*Chrysothamnus* sp.) occurring as associates. Red brome (*Bromus rubens*) commonly fills spaces between the larger plants.

Vegetation at the Caliente ANTC Site Location

This site also lies within the Great Basin vegetative community. Big sagebrush is the predominant overstory plant, with antelope bush and green ephedra rounding out the shrub community. Broom snakeweed, paintbrush and fiddlehead (*Amsinckia tessellata*) also occur. Also noted were several dried, standing stalks of what may be tumble mustard (*Sisymbrium altissimum*). Red brome grass is common across the disturbed areas.

Vegetation at the Coyote Springs ANTC Site Location

Vegetation is typical of mid-elevation Mojave Desert habitats. Most plants here are somewhat stunted. Creosote bush and white bursage dominate the assemblage with the creosote rarely exceeding about three foot heights. Associated shrubs include rhatany, joint-fir and indigo bush (*Psorothamnus fremontii*). Understory plants include desert marigold, desert mallow, broom snakeweed, little trumpet and windmills (*Allionia incarnata*). Mojave yucca (*Yucca schidigera*) occurs here, as do occasional diminutive beavertail cactus, silver cholla (*Opuntia echinocarpa*) and cottontop cactus. Catclaw (*Acacia greggii*), a desert riparian tree species, occupy drainages adjacent to the site but not the site itself.

Erik Miskow (personal communication) reports records of rosy two-tone beardtongue from adjacent Clark County, south of this site. However, no indication of either rosy two-tone beardtongue or Palmer's penstemon (*Penstemon palmeri* – a species somewhat similar to *P. bicolor*), was observed on or around the Coyote Springs site.

Additionally, no Meadow Valley sandwort was found on this site or in the surrounding area, but whether habitat in this vicinity is or is not appropriate for the species is questionable. Although reported from nearby localities, i.e., north end of the Las Vegas range and south end of the Meadow Valley Range (Miskow, personal communication,

Kartesz 1988), this relatively small, apparently localized annual is normally associated with desert, limestone cliffs and canyon walls at somewhat higher elevations (greater than 3,000 feet per Kartesz 1988) than this site provides. Survey timing probably hampered conclusive determination of the sandwort's status on this site because most annual species had already bloomed and faded in this section of the Mojave. In retrospect, the presence of sandwort at the proposed Coyote Springs site is possible, but unlikely.

Vegetation at the Highland Peak ANTC Site Location

Highland Peak lies within the Canadian Zone of the Boreal Forest. Local vegetation is dominated by limber pine (*Pinus flexilis*), mountain mahogany (*Cercocarpus ledifolius*) and mountain spray (*Holodiscus dumosus*). Rock spiraea (*Petrophyton caespitosum*), barberry (*Berberis aquifolium*), Mojave prickly pear and an unidentified thistle (*Cirsium* sp.) also occur.

Although the Meadow Valley sandwort occurs in habitats similar to that found here it has apparently not been reported this far north in Nevada (Kartesz 1988). Waxflower (cliffbush) does apparently occupy the Highland Range (Miskow, personal communication) and its requisite habitat (Kartesz 1988) is present at this site. Nonetheless, cliffbush was not noted at this location.

Miskow (personal communication) reiterates a 1939 report of long-calyx eggvetch in the Highland Range but Kartesz (1988) does not include the locality in his report of *A. o. lonchocalyx*' range. And despite seemingly appropriate habitat here (dry hillsides and stony flats on calcareous soils), this site's 9,300 foot-plus elevation is somewhat above the 8,600 foot upper level Kartesz denotes for the eggvetch. No vetch (*Astragalus* sp – a reasonably distinctive group of plants) was observed at this site location during the biological assessment (Appendix C), therefore the eggvetch is deemed an unlikely resident in this particular locality.

Vegetation at the Hiko Intersection ANTC Site Location

This site vicinity clearly reflects the transition from Mojave Desert to Great Basin plant communities. Creosote and bursage – Mojave Desert hallmarks – are entirely absent here, having been replaced by the Great Basin's exemplar: shadscale (*Atriplex confertifolia*). Commonly associated shrubs include indigo bush, spiny hopsage, joint-fir, cheese bush (*Hymenoclea salsola*), spiny menodora and rhatany. Common subshrubs are desert mallow, desert marigold, little trumpet, desert larkspur (*Delphinium parishii*) and desert sunflower (*Geraea canescens*). Fluff grass (*Erioneuron pulchellum*) is common; freckled milk-vetch, bristly gilia (*Langloisia setosissima*) and stunted silver cholla occur as occasionals.

3.8 Visual Resource Management

The proposed project areas are within a region of generally undeveloped expanses of open, shrub-covered riverine valleys framed by low rolling hills, broad, low-angle alluvial fans and well defined, sometimes sharply rising and densely forested mountain blocks. Except within local human population centers – Alamo, Hiko and Caliente – the terrain frequently seems almost devoid of human presence and activity. Only the occasional dirt roads and irregularly apparent traces of ranching and farming remind travelers that the area is, in fact, occupied and used.

As identified in the Department of the Interior, Bureau of Land Management Visual Resource Contrast Rating manual 8431, Appendix 2 – VRM Class Objectives, Class III Objectives (BLM 1986) states "The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape."

3.9 Wild Horses

The Highland Peak ANTC site location lies within the territory defined for the Highland Peak Herd Management Area (HMA), which consists of two small mountain ranges (Highland and Chief) and their associated foothills. The Caliente ANTC site location is located in the Clover HMA to the east of Caliente, Nevada.

3.10 Wildlife

The seven proposed project locations occur in locations throughout Lincoln County. Individual discussions of wildlife characteristic of each area and the species actually noted at each proposed tower location during the biologic assessment are provided below.

3.10.1 Specific Wildlife Descriptions for the ANTC Site Locations

Wildlife at the Alamo Peak ANTC Site Location

Large mammals probably present in this vicinity include mule deer (*Odocoileus hemionus*), Rocky Mountain elk (*Cervus canadensis*), desert bighorn sheep (*Ovis Canadensis*), mountain lion (*Felis concolor*), bobcat (*Lynx rufus*) and coyote (*Canis latrans*).

Locally occurring bat species may include Yuma myotis (*Myotis yumanensis*), California myotis (*M. californicus*), small-footed myotis (*M. subulatus*), little brown myotis (*M. lucifugus*), long-eared myotis (*M. evotis*), fringed myotis (*M. thysanodes*), western pipistrelle (*Pipistrellus hesperus*), silver-haired (*Lasionycteris noctivagans*), big brown (*Eptesicus fuscus*), hoary (*Lasiurus cinereus*), spotted (*Euderma maculata*), pallid (*Antrozous pallidus*), Townsend's big-eared (*Corynorhinus townsendi*) and Mexican free-

tailed (*Tadarida brasiliensis*). Any or all of these same species may occur and forage around all of the proposed cell phone tower sites.

Raptors, including golden eagle (*Aquila chryseatos*), northern goshawk (*Accipiter gentiles*), red-tailed hawk (*Buteo jamaicensis*), ferruginous hawk (*B. regalis*), prairie falcon (*Falco mexicanus*), Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*A. striatus*) and turkey vulture (*Cathartes aura*) are probable residents or seasonal occupants. The area is almost certain to contain great-horned owls (*Bubo virginianus*). Northern flickers (*Colaptes auratus*), scrub jays (*Aphelocoma coerulescens*) and mourning doves (*Zenaida macroura*) are likely occupants. Various sensitive small bird species, including gray vireos (*Vireo vicinior*), pinyon jays (*Gymnorhinus cyanocephalus*), juniper titmice (*Baeolophus griseus*) and the loggerhead shrike (*Lanius ludovicianus*) may also occur.

The local reptile assemblage is probably not large but, in addition to the below-listed species actually observed, is likely to also contain western fence lizards (*Sceloporus occidentalis*), sagebrush lizards (*S. graciosus*) and western whiptails (*Aspidoscelis tigris*). Great Basin skinks (*Eumeces skiltonianus utahensis*) are possible occupants here. Striped whipsnakes (*Masticophis taeniatus*), Great Basin gopher snakes (*Pituophis catenifer deserticola*), common kingsnakes (*Lampropeltis getulus*) and, possibly, speckled rattlesnakes (*Crotalus mitchellii*) are the primary likely snake species in this area.

Side-blotched lizards (*Uta stansburiana*) and desert spiny lizards (*Sceloporus magister*) were observed at the proposed Alamo Peak site. Wood rat (*Neotoma lepida*) middens are common around the larger rock outcrops and boulders. This site is not suitable for occupation by desert tortoise, which typically resides at elevations well below 5,500 feet (Luckenbach 1982, Germano et al. 1994, Stebbins 2003).

Wildlife at the Alamo Town ANTC Site Location

Coyotes and mule deer certainly occur in lands adjacent to this site. Similarly, the desert kit fox (*Vulpes macrotis*), badger (*Taxidea taxus*), bobcat, black-tailed jackrabbits (*Lepus californicus*), desert cottontail rabbit (*Sylvilagus audubonii*) and the white-tailed antelope squirrel (*Ammospermophilus leucurus*) are local residents. Common ravens (*Corvus corax*) are abundant. Golden eagles, red-tailed hawks, ferruginous hawks, Cooper's hawks, prairie falcons and turkey vultures are likely local-area residents during various times of the year. The burrowing owl (*Athene cunicularia*) and barn owl (*Tyto alba*) also probably occur. Proximity of the Pahranagat Lakes makes periodic appearances by bald eagle (*Haliaeetus leucocephalus*), osprey (*Pandion haliaetus*), Canada geese (*Branta Canadensis*) and a variety of ducks and other waterfowl high probability events. Mourning dove, Gambel's quail (*Callipepla gambelii*), Say's phoebe (*Sayornis saya*) and a large variety of other resident and migrant birds move through this area on a regular basis.

Local reptiles include the Threatened desert tortoise, which reaches the northern extent of its Nevada range in this part of Lincoln County (Luckenbach 1982). Other representative,

locally occurring species include the side-blotched lizard, desert spiny, Great Basin collared lizard (*Crotaphytus insularis*), long-nosed leopard lizard (*Gambelia wislizenii*), desert iguana (*Dipsosaurus dorsalis*), western banded gecko (*Coleonyx variegatus*), zebra-tailed (*Callisaurus draconoides*), western whiptail and desert night lizard (*Xantusia vigilis*). The chuckwalla (*Sauromalus obesus*) and banded gila monster (*Heloderma suspectum cinctum*) are other local possibilities. Local serpents include the Great Basin gopher snake, common kingsnake, western long-nosed snake (*Rhinocheilus lecontei*), coachwhip/red racer (*Masticophis flagellum*), desert glossy snake (*Arizona elegans eburnata*), night snake (*Hypsiglena torquata*), western ground snake (*Sonora semiannulata*), Mojave Desert sidewinder (*Crotalus cerastes cerastes*) and southwestern speckled rattlesnake (*C. mitchellii pyrrhus*).

Red spotted toads (*Bufo punctatus*) occur in this area, and the nearby, irrigated pastureland makes Woodhouse's toad (*B. woodhousii*) another distinct possibility.

A Desert horned lizard (*Phrynosoma platyrhinos*) was observed on the access road from US 93, but there is no evidence of desert tortoise in this area. US 93 abuts the eastern base of the hill; irrigated pastureland abuts it to the west and the town of Alamo lies immediately north. In addition, the extremely rocky surface would make burrowing a questionable venture. No additional wildlife was observed at the proposed Alamo cellular tower site.

Wildlife at the Burnt Springs ANTC Site Location

Pronghorn antelope (*Antilocapra americana*), mule deer, bighorn sheep and kit fox probably occur in this vicinity. Bobcat, coyote and badger certainly do. Golden eagles; various hawks and falcons – including the northern harrier (*Circus cyaneus*), sharp-shinned, red-tailed, prairie falcon and American kestrel (*Falco sparverius*) – barn owl, burrowing owl, turkey vulture and common raven comprise the larger bird species. Numerous smaller birds, including the sage thrasher (*Oreoscoptes montanus*) and vesper sparrow (*Pooecetes gramineus*) reside in or move through this area on a regular basis.

Representative reptiles include the long-nosed leopard lizard, western fence lizard, sagebrush lizard, side-blotched lizard, Great Basin gopher snake, striped whipsnake, common kingsnake, night snake, and Great Basin rattlesnake (*Crotalus oreganus lutosus*). The Great Basin spadefoot toad (*Spea intermontana*) may occur in this vicinity.

Cattle (*Bos taurus*) trails crisscross the area; cattle tracks and droppings are commonplace. A livestock corral complex sits a few hundred yards south of the site. The Nevada Natural Heritage Program (Miskow, personal communication) reports no records of any sensitive species as occurring in the vicinity of this site. The area is clearly not desert tortoise habitat.

Wildlife at the Caliente ANTC Site Location

Mule deer occur in the vicinity of this site. Coyotes, badgers, and gray fox (*Urocyon cinereoargenteus*) are also found here. Mountain lion, bobcat and striped skunk (*Mephitis mephitis*) probably occur in this vicinity. A wide array of birds, similar to those mentioned previously, can be expected to occur around the Caliente site. A similar situation exists for the local reptile assemblage, which contains many of the species already noted for the other sites here under consideration.

Black-tailed jackrabbits, common ravens and a desert woodrat were observed at the proposed Caliente site. Additionally, two collared lizards and, on a large boulder complex, two desert spiny lizards were noted. This area is well beyond the tortoise's recognized range.

Presence of mature big sagebrush on and adjacent to the proposed site suggested the potential presence of pygmy rabbit (*Brachylagus idahoensis*). Although the rabbit is not known to occur this far south in Nevada (Hall 1946), knowledge of its local range is far from complete. *Brachylagus* is typically associated with big sagebrush stands containing at least partially closed canopies, and growing in areas where deep soils allow the rabbit to easily burrow (Ulmschneider 2003). Though none of these conditions are evident at this site, the surrounding area was examined for rabbits, burrows, forms (resting platforms) and the rabbit's diminutive scat. No evidence of *Brachylagus* occupation was found in this area.

Wildlife at the Coyote Springs ANTC Site Location

Coyotes, kit foxes and badgers occupy this area. Desert bighorn sheep are found in the adjacent mountain ranges. Black-tailed jackrabbits, white-tailed antelope squirrels, kangaroo rats (probably most commonly Merriam's, *Dipodomys merriami*, but possibly also those of the chisel-toothed kangaroo rat, *D. microps*), pocket gophers (*Thomomys bottae*) and desert woodrats are common in the surrounding desert.

Golden eagles are seasonally common in this area, as are red-tailed hawks, turkey vultures, burrowing owls, and prairie falcons. Common ravens are abundant. Mourning doves, black-throated sparrows (*Amphispiza bilineata*), white-crowned sparrows (*Zonotrichia leucophrys*), crissal thrashers (*Toxostoma crissale*), loggerhead shrike (*Lanius ludovicianus*), northern mockingbirds (*Mimus polyglottos*), horned larks (*Eremophila alpestris*) and ash-throated flycatchers (*Myiarchus cinerascens*) are reasonably common.

The general area does contain desert tortoises and, quite probably, banded gila monsters (see Appendix C). Chuckwallas occur in appropriately rocky habitats in the nearby mountains. Commonly present around the site itself are side-blotched and desert spiny lizards, zebra-tailed lizards, long-nosed leopard lizards, western whiptails and desert horned lizards. Common snakes include the coachwhip, western long-nosed snake, Great Basin gopher snake, common kingsnake, glossy snake, night snake, Mojave Desert

sidewinder and Mojave rattlesnake (*Crotalus scutulatus*). Red spotted toads probably occur in and around this area.

Wildlife species observed at the proposed Coyote Springs cellular tower site include side-blotched lizards, mourning doves and common ravens. Burrows of kangaroo rat and middens of desert wood rat are also plentiful.

Although consultations with the Nevada Natural Heritage Program in Carson City identified this location as lying within a broader area known to be occupied by desert tortoises, no tortoise sign was observed at this particular locality. Examination of the site and utility corridor, and outlying transects located 10, 100, 200 and 400 yards from the north, west and south boundaries of the site (the east side was omitted because of the highway's nearby presence) failed to reveal any indication of tortoise occupation or use. Desert kit fox and badger burrows were reported (Appendix C).

Wildlife at the Highland Peak ANTC Site Location

This site provides important summer range for both mule deer and Rocky Mountain elk. Mountain lions also certainly occupy the Highland Range; coyotes, gray fox and bobcat probably occupy the peak's lower elevations, at least. Striped skunks occur locally.

Golden eagles, northern goshawk, prairie falcon, turkey vultures, pinyon jays, juniper titmice, gray vireos and Clark's nutcracker (*Nucifraga columbiana*) also use this area.

The local reptile assemblage is quite limited here. Western fence lizards and Great Basin gopher snakes may occur, but their presence on the summit of Highland Peak itself is somewhat questionable.

Mule deer sign is common at the Highland Peak site. Pinyon jays (*Gymnorhinus cyanocephalus*) and common ravens were also reported during the survey. This site provides no desert tortoise habitat.

Wildlife at the Hiko Intersection ANTC Site Location

Mule deer occur locally; coyotes, badgers and black-tailed jackrabbits may also be found here. Golden eagles ferruginous hawks, prairie falcons, turkey vultures and burrowing owls comprise the larger, locally occurring bird species. Loggerhead shrikes and vesper sparrows also frequent this area.

This area supports a diverse array of reptiles, several of which (see below) were observed during the site survey. Other notable snake species likely to be found in this area are the common kingsnake and Great Basin rattlesnake.

Numerous black-tailed jackrabbits were observed at the proposed site. Lizards including side-blotched, western whiptail, zebra-tailed, long-nosed leopard and desert horned were similarly abundant. Horned lizards were particularly plentiful; no fewer than fourteen

were noted during the survey. Many were sub-adults, indicating good reproduction by this species last year. Additionally, an adult Great Basin gopher snake was observed.

Neither this site nor its associated utility corridor provide suitable habitat for the desert tortoise, which is not known to occur this far north in Nevada (Germano et al. 1994).

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Proposed Action

Under the proposed action, the need for the proposed project would be met. Cellular communications facilities and service would expand service coverage. The following-described project-associated impacts potentially would occur.

4.1.1 Cultural Resources (Archaeology and Historic Preservation)

Potential project-related impacts to sites of archaeological and historic value found along the route were not detected except one National Register of Historic Places (NRHP) eligible prehistoric *ad hoc* toolstone quarry site, 26LN1568, which could not be avoided because no suitable alternative communication sites could be found in the vicinity of the Hiko Intersection locale. The proposed Hiko Intersection communication site is one tower in a series of sites which will link communication services in the region, with the proposed Hiko Intersection site serving as a repeater site for the entire communication route. In order for the network to function, each tower must have line of sight with the next tower in the series resulting in limited options for shifting or moving a tower location. Since site 26LN1568 is eligible only for its potential to yield important information in prehistory (criterion "d" of 36CFR 60.4) treatment in the form of data recovery would negate adverse effects. All data recovery would be subject to a plan approved by BLM, developed and implemented at the proponent's expense. No construction activities could take place at this location until a "notice to proceed" be issued contingent on completion of all fieldwork, provisions guaranteeing an acceptable report, and curation of all collected specimens are assured. If data recovery is completed, this undertaking would have "no adverse effect" on National Register properties. If required by the BLM, a BLM approved archaeological monitor (funded by the project proponent) would be present during construction at any, or all, of the tower locations to further reduce any likelihood of entry onto and damage to these locations.

4.1.2 Invasive, Non-Native Species

This project has the potential to introduce and/or exacerbate spread of invasive, non-native species, including noxious weeds.

Mitigation to prevent spread of known noxious weed concentrations or introduction of presently absent species is set forth in the Mitigation subsection of the Description of the Proposed Action.

4.1.3 Migratory Birds

Project construction would not impact nesting migratory birds or their nests. Per standard BLM stipulations, any project action anticipated during the 1 May – 15 July critical nesting season would precipitate:

1) preparation, by the project proponent, of appropriate maps showing areas subject to project-related disturbance and;

2) survey, by BLM-approved wildlife team, to determine if migratory bird breeding or nesting is occurring in the project area.

Because nesting may begin earlier than 1 May at the lower elevation sites, i.e., Alamo Town, Burnt Springs, Caliente, Coyote Springs and Hiko Intersection, the above stipulations would apply to project actions beginning 1 April.

Project actions would be permitted only in areas determined to be clear of migratory bird nesting activity.

Because the cellular phone towers could be within regionally important bird migration corridors, the towers could introduce new long-term collision hazards to nocturnally migrating birds. Locally breeding and wintering raptors might also be affected. Also, because of their 125 – 195 foot height, any aircraft avoidance lighting – a feature that attracts migrating birds – could exacerbate the hazards to migrating birds.

4.1.4 Soils

Project construction would have the potential to disturb established surface soils or desert pavements at all of the proposed site locations. Some dirt at each tower location may be lost due to the creation and drift of dust particles. Increased soil erosion from rainfall runoff may result from the disruption of surface soils. However, prospective project impacts would be mitigated to the extent possible to avoid such occurrences.

4.1.5 Special Status Species

Listed and other sensitive species occupying the proposed project area could be subject to direct and indirect mortalities stemming from contact with project construction equipment and activities, maintenance equipment and activities and presence of project facilities (e.g. cellular towers). Potential mortality-causing factors include collisions with equipment and facilities; project-associated alteration of local plant communities; encounters with project-generated toxic substances (e.g. petroleum spills) and project-related disturbance during critical (e.g., breeding and nesting) periods; and project associated alterations to natural predator-prey dynamics. This is specifically in reference to associated new perching sites for common ravens and their known impact on desert tortoise.

Various aspects of project extent or design have been incorporated to prevent or reduce severity of potential project-related impacts.

Tortoise habitat at the Alamo Town and Coyote Springs sites would be reexamined just prior to project initiation. Tortoises in the project area would be relocated, in accordance with current FWS tortoise relocation protocols, to adjacent habitat. To prevent foraging tortoise from entering the project corridor during construction, either a FWS- or BLM-approved tortoise monitor would be present, as required, during construction through tortoise habitat or the project areas would be temporarily fenced to exclude entry by tortoises.

4.1.6 Vegetation

Project construction would have the potential to disturb, injure or kill individuals of any plant species growing at all of the proposed site locations. However, prospective project impacts would be mitigated to the extent possible to avoid such occurrences.

4.1.7 Visual Resource Management

Visual Resource studies were conducted for five of the seven towers (Arizona Nevada Tower Corporation 2006a, 2006b, 2006c, 2006d, 2006e). Two locations were not subject to VRM analysis as the proposed cellular towers will be placed alongside existing tower facilities similar in construction and will result in no significant impacts to the viewshed at those locations. Individual discussions of the VRM analysis results are provided below, and the VRM analysis studies are attached as Appendix E.

Alamo Town ANTC Site Location VRM Analysis

The proposed Alamo Town site is accessed by exiting US Highway 93 to a dirt road and sits at superior position to the viewer; situated on a small knoll adjacent to the highway. VRM analysis of the site did not identify any of the contract elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the ever-present transmission line, urban development (Alamo and surrounding development), water tank and the strong contrast associated with the mountains in the background of both Key Observation Points, will attract more attention from the viewer than the proposed cellular tower facility.

Alamo Peak ANTC Site Location VRM Analysis

No VRM study was required for the proposed Alamo Peak site.

Burnt Springs ANTC Site Location VRM Analysis

The proposed site is accessed by exiting US Highway 93 to a dirt road and sits in a horizontal position to the viewer. VRM analysis of the site did not identify any of the

contract elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the ever-present transmission line and the strong contrast associated with the mountains in the background of both Key Observation Points, will attract more attention from the viewer than the proposed cellular tower facility.

Caliente ANTC Site Location VRM Analysis

Accessed by exiting US Highway 93 to a dirt road, the proposed Caliente cellular tower site sits in superior position to the viewer. VRM analysis of the site did not identify any of the contract elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the urban development (housing, business, billboards, business signage), the ever-present transmission line and the strong contrast associated with the vertical rise in the background of both Key Observation Points, will attract more attention from the viewer than the proposed cellular tower facility.

Coyote Springs ANTC Site Location VRM Analysis

The proposed Coyote Springs cellular tower site is accessed by exiting US Highway 93 to a dirt road and sits at level position to the viewer. The facility sits on a gentle slope adjacent to the highway. VRM analysis of the site did not identify any of the contract elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the ever-present transmission line and the strong contrast associated with the mountains in the background of both Key Observation Points, will attract more attention from the viewer than the proposed cellular tower facility.

Highland Peak ANTC Site Location VRM Analysis

No VRM study was required for the proposed Alamo Peak site.

Hiko Intersection ANTC Site Location VRM Analysis

Accessed by exiting State Highway 375 to a dirt road, the proposed Hiko Intersection site is situated in a horizontal position to the viewer. VRM analysis of the site did not identify any of the contract elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of State Highway 375 in the foreground and mid-ground, the ever-present transmission line and the strong contrast associated with the mountains in the background of both Key Observation Points, will attract more attention from the viewer than the proposed cellular tower facility.

4.1.8 Wild Horses

Impacts to the wild horses currently occupying the Highland Peak and Clover HMAs would be minimal because construction would be outside the horses' primary use area. In

addition, any wild horses present would probably vacate the immediate vicinity during construction activity. Some disturbance to animals grazing nearby could arise as a result of equipment-related noise and dust.

4.1.9 Wildlife

Project development would have the potential to disturb, injure or kill individuals of any wildlife species occupying or otherwise using the proposed site locations during construction and some aspects of project operation (e.g. wind turbines). However, prospective project impacts would be mitigated to the extent possible to avoid such occurrences.

4.2 No Action Alternative

Under the No Action Alternative the need for the proposed project would not be met. Cellular communications facilities and service would remain static. The above-described project-associated impacts would not occur.

5.0 CUMULATIVE IMPACTS

According to the 1994 BLM Handbook Guidelines for Assessing and Documenting Cumulative Impacts, the cumulative analysis should be limited to those issues and resource values identified during scoping that are of major importance. The issues of major importance identified during the internal scoping (refer back to Section 1.4) were:

- Impacts to wildlife and vegetation (e.g. special status species, migratory birds and vegetation)
- Impacts to cultural resources (archaeological and historical)
- Potential to proliferate the spread of invasive non-native noxious weeds
- Impacts to visual resources

A general discussion of past, present, and reasonably foreseeable future actions follows.

5.1 Past Actions

Past actions in the project areas include: BLM permitted grazing, Alamo town development, road construction and maintenance, communication tower and facility construction, utility rights-of-way (e.g. overhead and buried telephone and electrical cables), wildland fires and the associated impacts.

5.1.1 Specific Actions Applicable to the Issues of Major Importance

Wildlife and Vegetation

Construction and use of US Highway 93 and connecting routes has certainly caused the most impact to wildlife and vegetation in the vicinity of the proposed ANTC tower

locations. The presence of the highway has contributed an unknown number of vehicle collisions with desert tortoise near Coyote Springs. Livestock grazing in the Pahranagat Valley has also probably contributed to tortoise mortalities through competition for local forage. Construction of US 93 sections adjacent to the Pahranagat Lakes probably impacted, to an unknown degree, bald eagles' (and other species') use of the area. Similarly, construction through Ash Springs – and particularly across the Springs' outflow – probably caused some loss of fish there and may have simultaneously impacted use of the willow and cottonwood thickets west of the highway by yellow-billed cuckoo and other bird species. Construction of US Highway 93 probably destroyed an unknown number of cacti and yuccas that previously occupied the highways' footprints. Construction of associated right-of-way fences may have caused injury to or death of tortoises and local plants.

The construction of the existing communication sites on Alamo Peak and Highland Peak impacted vegetation in each facilities footprint. The impact on migratory birds and raptors is not fully known. The construction of the above ground electrical and telephone pole lines at the Coyote Springs location has likely lead to elevated rates of tortoise mortality due to associated perching sites afforded common ravens. The existing water tower at the Alamo Town location may similarly provide perching locations that alter the raven-tortoise predator-prey dynamic.

Cultural Resources

Highway construction and maintenance has physically disrupted some archaeological resource sites along the US 93 corridor. Right-of-way fence installation may have disturbed sites in and adjacent to those corridors. Increased visibility and access to the sites as a result of the highways' presence has precipitated more visits. Designation did not increase awareness of the White River Narrows as a National Register site, but the BLM's posting of interpretive/portal signs, visitor registers, and management as a public site has increased local awareness about the area's fragile nature and cultural significance.

Invasive, Non-Native Species

Various activities have resulted in establishment of spotted and Russian knapweed around Crystal Springs, near the US 93/SR 318 junction.

Visual Resource Management

Various past projects have resulted in the erection of other communication towers, landline telecommunications facilities, water tanks, power poles, and a corral at the proposed ANTC locations.

5.2 Present Actions

Present actions in the project areas include the granting of rights-of-way for the proposed actions. Granting the right-of-ways for the cellular towers would potentially impact the following Critical Elements: Cultural Resources, Invasive Non-Native Species, Migratory Birds, Soils, Special Status Species, Vegetation, Visual Resource Management, Wild Horses and Wildlife. Project construction would be consistent with local land-use plans to provide lands for communication sites for use by Federal, State and local government agencies and the public, as needed. Mitigation measures have been proposed to lessen the potential impact to the identified Critical Elements and issues of major importance discussed in this EA.

5.2.1 Present Actions Related to the Issues of Major Importance

Wildlife and Vegetation

Project construction, while consistent with local land-use plans, has the potential to kill or injure protected reptiles, birds and mammals, and damage or destroy plants in the construction corridor. Depending upon construction timing[4], project-associated increased traffic could slightly increase the number of highway-related tortoise mortalities. The presence of the proposed tower(s) may lead to elevated rates of tortoise mortality due to added perching sites afforded common ravens (at the two relevant sites).

Cultural Resources

As a result of this proposal each of the project tower sites have been thoroughly inventoried and recorded by professional archaeologists. Ely Field Office BLM staff now have a far more complete and detailed picture of cultural and historic resources in this area. This increased knowledge provides a solid base from which prudent management decisions affecting this area can be made.

To reduce likelihood of these sites being damaged, the proposed project has purposely incorporated avoidance of identified cultural and historic resources into its design where possible.

Invasive, Non-Native Species

Recognition of the project's potential to introduce or spread noxious weeds, together with mitigation measures designed to prevent such occurrence should minimize or prevent new infestations along the project corridor.

[4] Tortoises are normally winter-dormant and remain in their burrows from mid- or late October through about mid- or late February.

Visual Resource Management

The visual impacts will be somewhat limited due to the existence of previously constructed features at each of the locations (e.g. utility poles, communications sites, water tanks), but will be long term in duration. Following mitigation methods included as part of this proposed action would reduce the visual impact of the proposed ANTC towers.

5.3 Reasonably Foreseeable Future Actions

Future communication facilities may be clustered at these locations in keeping with local land-use plans.

5.4 Discussion of Cumulative Impacts

Cumulative impacts are impacts on the environment which result from the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency or person undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Mitigation methods included as part of this proposed action would lessen the potential impact to the identified Critical Elements and issues of major importance discussed in this EA. Cumulative impacts related to the issues of major importance or discussed below.

5.4.1 Cumulative Impacts Related to the Issues of Major Importance

Wildlife and Vegetation

Various animal and plant species, now granted assorted degrees of state and/or federal protection, were undoubtedly impacted by the past actions discussed above (Section 5.1.1). The proposed project could contribute to cumulative losses via renewed local ground-disturbing activities within the footprints of the tower sites and along roads utilized for the project. Given current BLM management policies, however, it is unlikely that these losses would be large or precipitate new *Threatened* or *Endangered* listings. As a benefit, project-related surveys have provided updated information regarding the presence or absence of some sensitive species (e.g., desert tortoise) within and adjacent to the project corridor.

Cultural Resources

Because avoidance of recognized sites has been a key project objective, impacts will occur only at one project location – the Hiko Intersection ANTC site location. No project-associated physical disruption of cultural materials should accrue at the other locations unless previously unknown (buried) sites are discovered during construction. Such occurrence would cause a cessation of project operations at least until the new

materials could be assessed. Impacts to cultural resource site 26LN1568 can be negated through the development and implementation of a data recovery plan.

Invasive, Non-Native Species

Following mitigation methods included as part of this proposed action would reduce the likelihood of spreading known noxious weed infestations or introducing new species into the project corridor.

Visual Resource Management

By constructing the proposed towers in locations with existing facilities (communications towers, power poles, water tanks, etc.), other regional undeveloped public lands are preserved. The limited visual impacts will be long term in duration. Following mitigation methods included as part of this proposed action would reduce the visual impact of the proposed ANTC towers.

6.0 PROPOSED MITIGATION

Appropriate mitigation has been included as part of the Proposed Action. No additional mitigation is proposed.

7.0 SUGGESTED MONITORING

Appropriate monitoring has been included as part of the Proposed Action. No additional monitoring is proposed.

8.0 CONSULTATION AND COORDINATION

8.1 List of Preparers

This EA was prepared at the direction of the BLM, Ely Field Office, Ely, Nevada, by the HRC, under a contract with ANTC. The following is a list of individuals responsible for preparation of the EA:

Bureau of Land Management, Ely Field Office

Carolyn Sherve-Bybee	NEPA
Ann Perkins	Lands and Realty
Charles Flynn	Lands and Realty
Mark Henderson	Cultural Resources
Nathan Thomas	Cultural Resources
Lisa Gilbert	Cultural Resources
Steve Abele	Contract Wildlife
Elvis Wall	Native American Coordinator
Steven Leslie	Outdoor Recreation/Wilderness/VRM
Shirley Johnson	Range and Weeds

Bureau of Land Management, Ely Field Office (Continued)

Jared Bybee	Wild Horses
Paul Podborny	Wildlife

Arizona Nevada Tower Corporation

George Peel	President
Ron Ayers	Vice-President

Harry Reid Center for Environmental Studies, UNLV

Diane L. Winslow	Director, Division of Cultural Resources
Jeffrey R. Wedding	Archaeologist III

Desert WalkAbouts, Inc.

Alex L. Heindl	Principal

8.2 Persons, Groups, and Agencies Contacted

The following is a list of persons, groups and agencies contacted during preparation of the EA:

Federal Agencies

Bill Smith	U.S. Fish and Wildlife Service

State Agencies

Erik S. Miskow	Nevada Natural Heritage Program

8.3 Public and Agency Involvement Activities

BLM will post this EA on its web site and allow a 30 day public comment period for the document. Comments will be taken either by phone, in writing, or as a comment directly on the web site. BLM is the lead agency and has coordinated with other agencies as necessary for project requirements and information.

The BLM Ely Field Office held a regularly scheduled quarterly Native American Coordination Meeting on March 22, 2007, in which the proposed cellular towers were discussed. No questions, comments, or concerns were raised during this meeting by the tribes in attendance.

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APPENDIX A

DESERT TORTOISE
TERMS AND CONDITIONS FOR
SURFACE DISTURBING ACTIVITIES
(LANDS AND MINERALS)

DESERT TORTOISE
TERMS AND CONDITIONS FOR SURFACE
DISTURBING ACTIVITIES
LANDS AND MINERALS

The holder of the right-of-way grant #### would be subject to the U.S. Fish and Wildlife Service's ("Service") Biological Opinion, File No. 1-5-99-F-450 which determined the "Terms and Conditions for Surface Disturbing Activities (Lands and Mineral Actions)" included in the Approved Caliente Management Framework Plan Amendment and Record of Decision for the Management of Desert Tortoise Habitat, dated September 2000 ("CMFPA"). The applicable Terms and Conditions for the Proposed Action begin on page 33 of the CMFPA and include the following items l thru u of that document:

l. A speed limit of 25 miles per hour shall be required for all vehicles on the project site and unposted dirt roads.

m. During surface-disturbing activities, tortoise burrows should be avoided whenever possible. If a tortoise is found onsite during project activities, which may result in take of the tortoise (e.g., in harm's way), such activities shall cease until the tortoise moves, or is moved out of harm's way. The tortoise shall be moved by a qualified tortoise biologist. All workers will also be instructed to check underneath all vehicles before moving such vehicles and within stockpiled materials. Tortoises often take cover under vehicles and construct burrows in stockpiled material.

n. Construction sites, staging areas, and access routes will be cleared by a qualified tortoise biologist before the start of construction. The project area shall be surveyed for desert tortoise using survey techniques which provide 100-percent coverage. From March 15 through October 15, the preconstruction clearance shall be no more than three days before initiation of construction and from October 16 through March 14, the preconstruction clearance shall be within ten days before work begins. All desert tortoise burrows, and other species' burrows which may be used by tortoises, will be examined to determine occupancy of each burrow by desert tortoises. Tortoise burrows shall be cleared of tortoises and eggs, and collapsed. Any desert tortoises or eggs found in the fenced area will be removed under the supervision of a qualified tortoise biologist in accordance with Service protocol.

o. The Bureau must approve the selected consulting firm/biologist to be used by the applicant to implement the terms and conditions of this biological opinion or permit issued by the Bureau. Any biologist and/or firm not previously approved must submit a curriculum vitae and be approved by the Bureau before being authorized to represent the Bureau in meeting compliance with the terms and conditions of this biological opinion. Other personnel may assist with implementing terms and conditions that involve tortoise handling, monitoring, or surveys, only under direct field supervision by the approved qualified biologist.

p. Tortoises and nests found shall be handled and relocated by a qualified tortoise biologist in accordance with Service-approved protocol. Burrows containing tortoises or nests will be excavated by hand, with hand tools, to allow removal of the tortoise or eggs. Desert tortoises moved during the tortoise inactive season or those in hibernation, regardless of date, must be placed into an adequate burrow; if one is not available, one will be constructed in accordance with Desert Tortoise Council.

During mild temperature periods in the spring and early fall, tortoises removed from the site will not necessarily be placed in a burrow. Tortoises and burrows will only be relocated to federally-managed lands. If the responsible federal agency is not the Bureau, verbal permission, followed by written concurrence, shall be obtained before relocating the tortoise or eggs to lands not managed by the Bureau

q. *Tortoises that are moved offsite and released into undisturbed habitat on public land must be placed in the shade of a shrub, in a natural unoccupied burrow similar to the hibernaculum in which it was found, or in an artificially constructed burrow in accordance with Desert Tortoise Council.*

r. *If possible, overnight parking and storage of equipment and materials, including stockpiling, shall be in previously disturbed areas or areas to be disturbed which have been cleared by a tortoise biologist. If not possible, areas for overnight parking and storage of equipment shall be designated by the tortoise biologist which will minimize habitat disturbance.*

s. *All vehicular traffic will be restricted to existing access roads, or those roads approved by the Bureau in consultation with the Service. New access roads are not covered under this biological opinion.*

t. *Project activity areas will be clearly marked or flagged at the outer boundaries before the onset of construction. All activities shall be confined to designated areas. Blading of vegetation will occur only to the extent necessary and shall be limited to areas designated for that purpose by the Bureau or tortoise biologist.*

u. *Prior to issuance of any permit, lease, or authorization for any surface-disturbing activity, the project proponent shall pay a remuneration fee for each acre of surface disturbance. Remuneration fees…. shall be based upon the desert tortoise compensation report. Base land values…. shall be…. the amount currently assessed…. adjusted for inflation. The base land value shall be multiplied by the compensation rate for the project. ….*

The following Standard Operation Procedures included in the CMFPA are also applicable:

Permitting

3. *Temporary roads for exploration and operation will be closed to public by use of gates, signs or barrier of entry. These roads will be reclaimed once use is over.*

Construction

3. *During construction, if trenches or holes are to remain open overnight during the period of March 15 through October 15, they will be checked for tortoises at the end and beginning of each workday. The trenches or holes shall also be checked immediately prior to backfilling.*

Operations

1. *Petroleum products such as gasoline, diesel fuel, helicopter fuel, and lubricants will be containerized in approved containers. Hazardous materials shall be properly stored in separate containers to prevent mixing, drainage, or accidents.*
2. *Prior to starting operations each day on any lands…. which has(sic) not been totally enclosed by tortoise proof fencing and cattle guards, the operator will be responsible for assuring a desert tortoise survey is conducted by qualified desert tortoise biologists using techniques approved by the USFWS and BLM to make an inspection to determine if any desert tortoises are present, at the following:*
    a. *around and under all equipment;*
    b. *in and around all disturbed areas to include stockpiles and reject materials areas;*
    c. *in and around all routes of ingress and egress;*
    d. *in and around all other areas where the operation might expand to during that day.*
4. *Companies controlling new road segments may be required to restrict access to the general public. This access could be in the form of closed gates and these restrictions will not apply to legitimate, authorized agents of the operator or their subcontractor(s), the land managing agency and other agencies with a legitimate need.*

APPENDIX B

NEVADA NATURAL HERITAGE PROGRAM

Nevada Natural Heritage Program

Nevada Natural Heritage Program

Nevada Department of Conservation and Natural Resources
Richard H. Bryan Building
901 South Stewart Street, suite 5002 • Carson City, Nevada 89701-5245, U.S.A.
tel: (775) 684-2900 • internet: http://heritage.nv.gov

11 April 2006

Alex L. Heindl
University of Nevada Las Vegas
Harry Reid Center of Environmental Studies
4505 Maryland Parkway
Las Vegas, NV 89154-4009

RE: Data request received 07 April 2006

Dear Mr. Heindl:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/orat risk plant and animal taxa recorded within or near the proposed nine cell tower sites in Lincoln and Clark counties along US Highway 93 and the town of Pioche project areas. We searched our database and maps for the following a one kilometer radius around:

Township 01S	Range 66E	Section 03
Township 04S	Range 62E	Section 26
Township 04S	Range 67E	Section 17
Township 07S	Range 60E	Section 22
Township 07S	Range 61E	Section 08
Township 08S	Range 62E	Section 34
Township 12S	Range 63E	Section 07
Township 15S	Range 63E	Section 27
Township 17S	Range 63E	Section 29

The enclosed printout lists the taxa recorded within the given area. Please be aware that habitat may also be available for the Needle Mountains milkvetch, *Astragalus eurylobus*, a Nevada Bureau of Land Management (BLM) Sensitive Species; the rock purpusia, *Ivesia arizonica* var. *saxosa*, a Nevada BLM Sensitive Species; and the Arizona toad, *Bufo microscaphus*, a Nevada BLM Sensitive Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Ralph Phenix, Nevada Division of Wildlife at (775) 688-1565. Note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow
Biologist III/Data Manager

At Risk Taxa Recorded Near the Cell Tower Sites in Clark and Lincoln Counties Project Area

Compiled by the Nevada Natural Heritage Program for UNLV, Harry Reid Center

10 April 2006

Scientific name	Common name	Usfws	Blm	Usfs	State	Srank	Grank	Lat	Long	Prec	Last observed
Plants											
Arenaria stenomeres	Meadow Valley sandwort					S2	G2	363602N	1145418W	S	1996-05-17
Arenaria stenomeres	Meadow Valley sandwort					S2	G2	363537N	1145414W	S	1982-05-15
Astragalus oophorus var. *lonchocalyx*	Long-calyx Eggvetch	xC2	N			S2	G4T2	375557N	1143206W	G	1939-04-24
Jamesia tetrapetala	Waxflower	xC2	N	S		S2	G2	375240N	1143437W	S	1989-PRE
Penstemon bicolor ssp. *roseus*	rosy twotone beardtongue	xC2	N	S		S3	G3T3Q	362644N	1145826W	M	1980-04-25
Reptiles											
Gopherus agassizii	desert tortoise (Mojave Desert pop.)	LTNL	S	T	YES	S2S3	G4	362630N	1145714W	S	1987-PRE
Gopherus agassizii	desert tortoise (Mojave Desert pop.)	LTNL	S	T	YES	S2S3	G4	371221N	1150126W	S	1987-1990

U. S. Fish and Wildlife Service (Usfws) Categories for Listing under the Endangered Species Act:

- LT — Listed Threatened - likely to be classified as Endangered in the foreseeable future if present trends continue
- x C2 — Former Category 2 Candidate, now species of concern
- NL — Not Listed (no status) in a portion of the species' range

Bureau of Land Management (Blm) Species Classification:

- S — Nevada Special Status Species - USFWS listed, proposed or candidate for listing, or protected by Nevada state law
- N — Nevada Special Status Species - designated Sensitive by State Office

United States Forest Service (Usfs) Species Classification:

- S — Region 4 (Humboldt-Toiyabe NF) sensitive species
- T — Region 4 and/or Region 5 Threatened species

Nevada State Protected (State) Species Classification:

Fauna:

- YES — Species protected under NRS 501.

Precision (Prec) of Mapped Occurrence:

Precision, or radius of uncertainty around latitude/longitude coordinates:

- S — Seconds: within a three-second radius
- M — Minutes: within a one-minute radius, approximately 2 km or 1.5 miles
- G — General: within about 8 km or 5 miles, or to map quadrangle or place name

Nevada Natural Heritage Program Global (**Grank**) and State (**Srank**) Ranks for Threats and Vulnerability:

- G — Global rank indicator, based on worldwide distribution at the species level
- T — Global trinomial rank indicator, based on worldwide distribution at the infraspecific level
- S — State rank indicator, based on distribution within Nevada at the lowest taxonomic level
  - 1 — Critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors
  - 2 — Imperiled due to rarity or other demonstrable factors
  - 3 — Vulnerable to decline because rare and local throughout its range, or with very restricted range
  - 4 — Long-term concern, though now apparently secure; usually rare in parts of range, especially at its periphery
  - 5 — Demonstrably secure, widespread, and abundant
    - A — Accidental within Nevada
    - B — Breeding status within Nevada (excludes resident taxa)
    - H — Historical; could be rediscovered
    - N — Non-breeding status within Nevada (excludes resident taxa)
    - Q — Taxonomic status uncertain
    - U — Unrankable
    - Z — Enduring occurrences cannot be defined (usually given to migrant accidental birds)
    - ? — Assigned rank uncertain

APPENDIX C

ANTC BIOLOGICAL SURVEY REPORT

Biological Survey and Evaluation of Eight Proposed Cellular Telephone Tower Sites in Lincoln County, Nevada

Survey Conducted For

Arizona Nevada Tower Corporation
(ANTC)
1631 E. Sunset Road, Suite 114
Las Vegas, Nevada 89119

Alex L. Heindl
Marjorie Barrick Museum of Natural History
University of Nevada, Las Vegas
June 2006

Biological Survey and Evaluation of Eight Proposed Cellular Telephone Tower Sites in Lincoln County, Nevada

Introduction

Arizona Nevada Tower Company (ANTC), Las Vegas, proposes to construct eight new cellular telephone signal relay towers to enhance cell phone service in Lincoln County along the US Highway 93 corridor between Coyote Springs Valley and the town of Pioche (maps 1 – 16). In May, 2006 I examined ANTC's proposed construction sites in an effort to characterize their physical settings, existing habitats and species presence, and thus assess potential environmental impacts associated with implementing the project. Of particular concern is determining the extent to which these sites provide habitat for threatened, endangered or otherwise sensitive species.

Five of the eight proposed construction sites are 100 foot square parcels (Table 1). The remaining three are 50 x 100 feet, 50 x 120 feet and 100 x 200 feet respectively. Road access to each site is already in place but utility corridors would have to be extended, either above or below ground depending upon distance and terrain, to supply electricity to seven sites. Solar cells would power the remaining site.

Table 1. Locations and descriptions of eight cell phone signal relay towers proposed for construction along the US Highway 93 corridor in Lincoln County, Nevada, by Arizona Nevada Tower Corporation, Las Vegas, Nevada.

Site Name	Location[1]	Dimensions	Utility Corridor
Coyote Springs	NW4NW4SE4 Sec. 7, T12S R63E	100' x 100'	130' x 20'
Lower Pahranagat	SW4SE4NE4 Sec. 34, T8S R62E	100' x 100'	1000' x 20'
Alamo Town	SW4NE4NE4 Sec. 8, T7S R61E	100' x 100'	3200' x 20'
Alamo Peak	**Projected* Sec. 16, T7S R60E	50' x 120	None (Solar)
Hiko Intersection	NW4SW4SE4 Sec. 8, T5S R60E	100' x 100'	1320' x 20'
Burnt Springs	**Projected* Sec. 26, T4S R62E	100' x 100'	100' x 20'
Caliente	**Projected* Sec. 17, T4S R67E	50' x 100'	100' x 20'
Highland Peak	**Projected* Sec. 3, T1S R66E	100' x 200'	50' x 20'

[1]Relative to Mt. Diablo Base Meridian
*Unsurveyed lands

The towers would be steel lattice, three-sided (triangular) and free standing (no support wires). Each tower base would consist of a thirty foot-square concrete slab. Towers at the Alamo and Highland peak sites would be 125 feet high. The remaining towers would be 195 feet high.

Methods

Prior to conducting field surveys I contacted the Nevada Natural Heritage Program in Carson City and requested a search of its data base for records of sensitive taxa observed either on the actual sites or in the immediately surrounding areas. The Program's response (Miskow, pers. comm.) appears in condensed form in Table 2 and as Appendix 1 of this report. Upon receiving the Heritage Program's records, I consulted various references (e.g., Baldwin et al. 2002, Hickman 1993, Kartesz 1988, Pinzl 1986 and Mozingo and Williams 1980) to acquaint myself with the four plant species listed thereon and familiarize myself with locations and habitats in which these species are known to occur. Secondly, I consulted US Geological Survey 7.5 minute topographic maps associated with each site to obtain a sense of the general setting of each and, thereby, give myself some insight into what species to anticipate there.

Table 2. Sensitive species noted by the Nevada Natural Heritage Program as possibly occurring within the proposed ANTC cell phone tower project sites along the US Highway 93 corridor.

Species of Concern	Pertinent Locality Records	Potentially Affected ANTC Sites
Desert tortoise *Gopherus agassizii*	Coyote Springs Valley Pahranagat Valley	Coyote Springs Lower Pahranagat Alamo
Meadow Valley sandwort *Arenaria stenomeres*	Las Vegas Range Meadow Valley Range	Coyote Springs
Long-calyx eggvetch *Astragalus oophorus lonchocalyx*	Highland Range	Highland Peak
Waxflower (aka Cliffbush) *Jamesia tetrapetala*[1]	Highland Range	Highland Peak
Rosy two-toned beardtongue (aka Bi-colored penstemon) *Penstemon bicolor roseus*	Spring Mountains McCullough Mountains	Coyote Springs

[1] Kartesz (1988), Hickman (1993) and Baldwin et al. (2002) list this species as *Jamesia americana*.

I conducted field surveys on 16 through 19 May, examining each site and utility corridor to identify and record its general physical setting, associated vegetation and wildlife. I made sensitive species-specific searches where appropriate, based upon past records of occurrence as presented by Miskow (pers. comm.) and general habitat associations found on each particular site. Survey results are detailed in the following individual site reports.

Results

Coyote Springs

This 100 foot-square parcel is located 150 feet west of US Highway 93 approximately four miles north of the Clark/Lincoln County line (maps 1 – 2; photos 1 - 2). It is Situated on the lower middle reaches of a broad alluvial fan that dips eastward from the Sheep Range toward Pahranagat Wash, terrain is nearly level at the site's 2510-foot

Photo 1. Proposed Arizona Nevada Tower Corporation *Coyote Springs* cell phone tower site, Coyote Springs Valley, Lincoln County, Nevada. View west from US Highway 93.

elevation. Well-developed desert pavements of limestone mixed with occasional chert clasts typify the site surface; limestone cobbles and small boulders dot the site. Surface outcrops of caliche are irregularly apparent. A double wood pole power line corridor passes immediately east of the site and a wood pole communications tower rises above the site's northeast corner. Associated with that tower is a double wood pole frame supporting the transformer that connects to the power line, and a subsurface electrical service array, enclosed by cyclone fencing.

Vegetation is typical of mid-elevation Mojave Desert habitats. Most plants here are somewhat stunted. Creosote bush (*Larrea tridentata*) and white bursage (*Ambrosia dumosa*) dominate the assemblage with the creosote rarely exceeding about three foot heights. Associated shrubs include rhatany (*Krameria parvifolia*), joint-fir (*Ephedra*

Photo 2. Proposed Arizona Nevada Tower Corporation *Coyote Springs* cell phone tower site, Coyote Springs Valley, Lincoln County, Nevada. View to northwest.

nevadensis) and indigo bush (*Psorothamnus fremontii*). Understory plants include desert marigold (*Baileya multiradiata*), desert mallow (*Sphaeralcea ambigua*), broom snakeweed (*Gutierrezia sarothrae*), little trumpet (*Eriogonum inflatum*) and windmills (*Allionia incarnata*). Mojave yucca (*Yucca schidigera*) occurs here, as do occasional diminutive beavertail cactus (*Opuntia basilaris*), silver cholla (*O. echinocarpa*) and cottontop cactus (*Echinocereus polycephalus*). Catclaw (*Acacia greggii*), a desert riparian tree species, occupy drainages adjacent to the site but not the site itself.

I noted side-blotched lizards (*Uta stansburiana*), mourning doves (*Zenaida macroura*) and common ravens (*Corvus corax*) on or around the site. Burrows of kangaroo rat (*Dipodomys* sp.) and middens of desert wood rat (*Neotoma lepida*) are plentiful.

Although this location lies within a broader area known to be occupied by desert tortoises, I found no tortoise sign in this particular locality. After examining the site and utility corridor, I walked transects around the area at distances of 10, 100, 200 and 400 yards from the north, west and south boundaries – omitting only the east side because of the highway's presence. I noted several probable desert kit fox (*Vulpes macrotis*) and badger (*Taxidea taxus*) burrows but saw no indication of tortoise occupation within even this outlying region.

Miskow (pers. comm.) reports records of rosy two-tone beardtongue from adjacent Clark County, south of this site, and I looked for the penstemon during my survey here. Fortunately, *P. bicolor* is a rather tall (to about three feet) and distinctive that is hard to

miss. I found no indication of any beardtongue (Palmer's penstemon – *P. palmeri* – a species somewhat similar to *P. bicolor*), might also be encountered in this area) on or around this site.

I identified no Meadow Valley sandwort (*Arenaria stenomeres*) either on this site or in the surrounding area, but whether habitat in this vicinity is or is not appropriate for the species is questionable. Although reported from nearby localities, i.e., north end of the Las Vegas range and south end of the Meadow Valley Range (Miskow, pers. comm., Kartesz 1988), this relatively small, apparently localized annual is normally associated with desert, limestone cliffs and canyon walls at somewhat higher elevations (> 3000 feet – Kartesz 1988) than this site provides. In addition, survey timing probably hampered conclusive determination of the sandwort's status on this site because most annual species have already bloomed and faded in this section of the Mojave. In retrospect, I would consider sandwort presence here possible, but unlikely.

Presence, at this locality, of the other sensitive plants flagged by the Heritage Program is highly doubtful. None have never been reported either this far south or at elevations similar to that of this site (Baldwin et al. 2002, Hickman 1993, Kartesz 1988).

Although no Gila monsters (*Heloderma suspectum*) are known from this particular vicinity, I consider the lizard's presence here distinctly probable. Gila monsters occupy similar habitat in and around the Arrow Canyon Range to the southeast (Ferrand, pers. comm.) and I see no reason to doubt the Gila's presence in this area, as well.

Lower Pahranagat

Located approximately two miles northeast of US Highway 93 via Turtle Rock Road[1] the 100 foot-square Lower Pahranagat site sits atop a small hill at 3620 feet elevation (maps 3 – 4; Photo 3). A spur road runs right to the hilltop and the proposed tower site has been bladed and otherwise disturbed. A stone fire ring of contemporary age and remains of an abandoned juniper (*Juniperus* sp.) pole communications tower (grounding wire still evident) are located here. Spent cartridge cases evidence recreational shooting at this locality.

Beyond the hilltop area now compacted by vehicles and associated human activity, surface soils are somewhat sandy and unconsolidated. Rhyolitic cobbles and boulders are common across adjacent, local hillslopes. Similar stones that formerly occupied the proposed site were apparently moved to the edges during the clearing process.

Shrubs typical of this site and the surrounding area include creosote bush, white bursage, indigo bush, joint-fir, rhatany, spiny menodora (*Menodora spinescens*) and blackbrush (*Coleogyne ramosissima*). Joshua tree (*Yucca brevifolia*) is reasonably common as is

[1] Turtle Rock Road connects with US 93 approximately one mile northwest of Maynard Lake, near the southern end of Pahranagat Valley.

Photo 3. Proposed Arizona Nevada Tower Corporation *Lower Pahranagat* cell phone tower site, south of Alamo, Lincoln County, Nevada. View to east.

desert marigold. Prominent grasses are big galleta (*Pleuraphis rigida*) and Indian ricegrass (*Achnatherum hymenoides*). Fiddlehead (*Amsinckia tessellata*) is a ubiquitous understory element.

While much of this site is partially denuded, some attempted recolonization by local plants is evident. Many of the would-be colonizers – mostly creosote and indigo bush – however, appear to be repeatedly crushed by vehicles.

I observed several side-blotched lizards, one desert spiny lizard (*Sceloporus magister*), a coachwhip snake (*Masticophis flagellum*) and several ravens on or around this location. Evidence of kangaroo rat and desert woodrat is plentiful. Because this locality lies within potential desert tortoise habitat, I surveyed the hilltop and associated utility corridor, which extends approximately 1000 feet south from the hilltop to an existing power line, for evidence of tortoise. After finding no sign in these areas I examined outlying transects approximately 10, 100, 200 and 400 yards distant from the site boundaries. This effort also proved negative. Finally, I walked transects along the access road from the proposed tower site to US 93 and, during this part of the survey, noted two possible tortoise burrows in close proximity about thirty feet northwest of the road and approximately one half mile below the hilltop. As the local soil is quite sandy and its ability to long support a burrow appears doubtful, I was surprised to find these excavations where I did. Both were shallow, empty and neither showed any indication of recent use.

This site appears to provide no habitat that might reasonably host any of the sensitive plant species noted in Table 2.

Alamo

The Alamo site sits atop the small rhyolite knob on the west side of US 93 at the south end of Alamo (maps 5 – 6; Photo 4). A large water tank already occupies part of the summit; the proposed tower location lies immediately south of the tank. Local elevation

Photo 4. Proposed Arizona Nevada Tower Corporation *Alamo* cell phone tower site at Alamo, Lincoln County, Nevada. View to north.

is 3768 feet. Power would extend to this site from an existing line about 3200 feet west of the hill.

Despite lacking much surface soil the hilltop supports a diverse array of plant life. Shrubs include creosote bush, white bursage, rhatany, joint-fir, spiny menodora, spiny hop sage (*Grayia spinosa*), shadscale (*Atriplex confertifolia*), cheese bush (*Hymenoclea salsola*), paper bag bush (*Salazaria mexicana*) and cottonthorn (*Tetradymia axilaris*). Sub-shrubs include desert marigold, broom snakeweed, desert mallow and little trumpet. Big galleta is also present, along with numerous Engelmann's hedgehog (*Echinocereus engelmannii*) and, less commonly, beavertail and cottontop cactus. A thick stand of rubber rabbitbrush (*Chrysothamnus nauseosus*) grows on the hill's east side near the water tank's overflow drain.

I noted a desert horned lizard (*Phrynosoma platyrhinos*) on the access road from US 93, but there is no evidence of desert tortoise in this area. US 93 abuts the eastern base of the hill; irrigated pastureland abuts it to the west and the town of Alamo lies immediately north. In addition, the extremely rocky surface would make burrowing a questionable venture.

This site presents no suitable habitat for the four sensitive plant species reported by the Natural Heritage Program. It is well north of the beardtongue's and sandwort's known ranges and too low in elevation to host the waxflower (Kartesz 1988). Although the egg vetch is known from the Delamar and Clover mountains, east of this site, that species' usual association with calcareous (limestone-based) soils (Kartesz 1988) would seem to preclude its occurrence in this volcanic terrain.

Alamo Peak

Located at an elevation of 6168 feet, Alamo Peak overlooks Alamo and the Pahranagat Valley (maps 7 – 8). Accessed from US 93 via South Richardville and Canyon roads on Alamo's northwest side, the Peak's summit has long served as a communications tower site for a variety of utilities (Photo 5). Because solar energy would power this site, there is no associated utility corridor.

Photo 5. Proposed Arizona Nevada Tower Corporation *Alamo Peak* cell phone tower site, Pahranagat Range, Lincoln County, Nevada. View to south.

The intended tower location lies on the Peak's eastern face. Local terrain consists of decomposing granitics interspersed with outcrops, boulders and cobbles of similar igneous origin. Vegetation is pinyon/juniper, with well-spaced single-leaf pinyon pine (*Pinus monophylla*), juniper (*Juniperus occidentalis*) and antelope bush (*Purshia tridentata*) comprising the overstory. Plants are typically stunted and wind-sculpted. Big sage (*Artemisia tridentata*), green ephedra (*Ephedra viridis*) and blackbrush dominate the understory. Broom snakeweed, paintbrush (*Castilleja chromosa*) and scattered Mojave prickly pear (aka old man cactus – *Opuntia erinacea*) occur as occasionals.

I noted side-blotched and desert spiny lizards here. Wood rat middens are common around the larger rock outcrops and boulders. This site is not suitable for occupation by desert tortoise, an animal typically residing at elevations well below 5500 feet (Luckenbach 1982, Germano et al. 1994, Stebbins 2003), and the locality is well north of the beardtongue and sandwort's recognized ranges. The local, granitic soils would also appear to preclude both sandwort and egg vetch presence. Although unreported from the Pahranagat range, because waxflower (cliffbush) is a recognized component of pinyon/sage habitats elsewhere in Nevada (Kartesz 1988) I looked for it. This low, thickly branched shrub possesses reasonably distinct identifying characteristics and, if present, is likely to be readily apparent. However, I found no evidence of it at this site.

Hiko Intersection

Located a short distance west of the junction of state routes 318 and 375, approximately five miles south of Hiko, the Interchange site lies on the toe of a large alluvial fan that falls eastward from the Mt. Irish Range to the ancestral White River channel (maps 9 – 10; Photo 6). At 4061 feet elevation, the site rests on a stable bench within the fan. Large, active wash channels several hundred feet to the north and south flank it. State Route 375 lies between the south-side drainage and the intended tower location. Adjacent to the site is an actively used livestock corral complex. Cattle (*Bos taurus*) apparently graze this site and their tracks and droppings are commonplace.

Road access already exists but the nearest power source lies approximately 1320 feet north of the site. A spur powerline is needed to connect the two.

Surface soil here consists of loose, sandy, relatively well-sorted alluvia. Contained within are pebbles, small cobbles and clasts of quartzite, rhyolitic volcanics, limestone, chert and jasper – detritus washed from the complex lithology of the Mt. Irish Range, eight miles to the west. Many of these rocks show signs of having been "tested" for potential use as tools by prehistoric peoples. Flakes and cast-off cores of former cobbles abound.

This site vicinity reflects beginnings of the transition from Mojave Desert to Great Basin plant communities. Creosote and bursage – Mojave Desert hallmarks – are entirely absent here, having been replaced by the Great Basin's exemplar: shadscale. Commonly associated shrubs include indigo bush, spiny hopsage, joint-fir, cheese bush, spiny

Photo 6. Proposed Arizona Nevada Tower Corporation *Hiko Interchange* cell phone tower site near Hiko, Lincoln County, Nevada. View to southeast.

menodora and rhatany. Common subshrubs are desert mallow, desert marigold, little trumpet, desert larkspur (*Delphinium parishii*) and desert sunflower (*Geraea canescens*). Fluff grass (*Erioneuron pulchellum*) is common; freckled milk-vetch (*Astragalus lentiginosus*), bristly gilia (*Langloisia setosissima*) and stunted silver cholla occur as occasionals.

I noted numerous black-tailed jackrabbits (*Lepus californicus*) around the site. Lizards, including side-blotched, western whiptail (*Aspidoscelis tigris*), zebra-tailed (*Callisaurus draconoides*), leopard (*Gambelia wislizenii*) and desert horned, were similarly abundant. Horned lizards were particularly plentiful; I counted no fewer than fourteen during this survey. Many were sub-adults, indicating good reproduction by this species last year. I also saw one adult gopher snake (*Pituophis catenifer*).

Neither this site nor its associated utility corridor provide suitable habitat for the desert tortoise or any of the plants listed in Table 2. Desert tortoises are not known to occur this far north in Nevada (Germano et al. 1994) and habitats described by Kartesz (1988) for the four plants under consideration here are not found in this vicinity.

Burnt Springs

Located about six miles south of Pahroc Summit Pass (approximately 25 miles west of Caliente on US 93), the Burnt Springs site lies in the middle reaches of a large alluvial fan that dips gradually northeast from the South Pahroc Range (maps 11 – 12; Photo 7). Local elevation is 4999 feet. The site's southern boundary abuts a local powerline corridor and maintenance road.

Photo 7. Proposed Arizona Nevada Tower Corporation *Burnt Springs* cell phone tower site, east of South Pahroc Range, Lincoln County, Nevada. View to west.

This site is reasonably flat. Local soil is rather loose and granular and is comprised mostly of clasts and small cobbles of eroded volcanics washing from the South Pahroc Range some two miles to the west. Small obsidian nodules are scattered across the site and surrounding area.

Local vegetation is clearly Great Basin. Little sagebrush (*Artemisia arbuscula*) dominates the landscape with desert mallow, paintbrush, freckled milk vetch and an unidentified rabbitbrush (*Chrysothamnus* sp.) occurring as associates. Red brome (*Bromus rubens*) commonly covers spaces between the larger plants.

Cattle trails crisscross the area; cattle tracks and droppings are commonplace. A livestock corral complex sits a few hundred yards south of the site.
The Nevada Natural Heritage Program (Miskow, pers. comm.) reports no records of any sensitive species as occurring in the vicinity of this site. This area is clearly not desert

tortoise habitat and its elevation and terrain suggest it unsuitable for the plant species listed in Table 2.

Caliente

Overlooking the town of Caliente from the southeast (maps 13 – 14; Photo 8), the rocky hill on which the ANTC tower would be placed is already used as a communications relay site by Lincoln County Telephone Co., Inc. The hilltop, elevation 4433 feet, shows considerable recent disturbance (road blading and excavation) in addition to that associated with the Telephone Company facilities. Domestic litter and fire remains indicate possible use of this area by partiers. Power, currently available at the site, would have to be extended approximately 100 feet if the tower is constructed.

Photo 8. Proposed Arizona Nevada Tower Corporation *Caliente* cell phone tower site, Caliente, Lincoln County, Nevada. View to north.

Intact surfaces show a coarse, granular soil of volcanic origin interspersed with exposures of the underlying volcanic strata. Boulders, some quite large, are commonplace along edges of the hilltop.

Big sagebrush (*Artemisia tridentata*) is the predominant overstory plant, with antelope bush and green ephedra rounding out the shrub community. Broom snakeweed, paintbrush and fiddlehead also occur. I also noted several dried, standing stalks of what

may be tumble mustard (*Sisymbrium altissimum*). Red brome grass is common across the disturbed areas.

I observed black-tailed jackrabbits, ravens and a desert woodrat during this survey. I also saw two collared lizards (*Crotaphytus insularis*) and, on a large boulder complex, two desert spiny lizards.

This area is well beyond the tortoise's recognized range and the site appears to contain no habitat (as described by Kartesz 1988) suitable for the four plants noted in the Natural Heritage Program report.

Presence of mature big sagebrush on and adjacent to the proposed site prompted me to look for evidence of pygmy rabbit (*Brachylagus idahoensis*) during this survey. Although the rabbit is not known to occur this far south in Nevada (Hall 1946), knowledge of its local range is far from complete. *Brachylagus* is typically associated with big sagebrush stands containing at least partially closed canopies, and growing in areas where deep soils allow the rabbit to easily burrow (Ulmschneider 2003). Though none of these conditions are evident at this site, I examined the surrounding area for rabbits, burrows, forms (resting platforms) and the rabbit's diminutive scat. I found nothing to indicate presence of *Brachylagus* in this area.

Highland Peak

Just the drive to this site is enough to grip one's attention. Winding upward from State Route 320, west of Pioche, in an ever-tightening series of switchbacks, the road to Highland Peak is not for the faint-hearted. The site, situated just below the 9397-foot summit of the Highland Range (maps 15 – 16), lies along the Peak's southeast slope and just below the access road (Photo 9). Numerous other utilities have previously installed an assortment of towers and associated service buildings along this same ridge. Power would have to be extended from an existing source approximately fifty feet from the site.

The country rock here is predominantly limestone and dolomite; terrain on the proposed site is moderately steep and very rocky. Local vegetation is dominated by limber pine (*Pinus flexilis*), mountain mahogany (*Cercocarpus ledifolius*) and mountain spray (*Holodiscus dumosus*). I also noted rock spiraea (*Petrophyton caespitosum*), barberry (*Berberis aquifolium*), Mojave prickly pear and an unidentified thistle (*Cirsium* sp.).

Mule deer (*Odocoileus hemionus*) sign is common. I observed pinyon jays (*Gymnorhinus cyanocephalus*) and ravens during the survey.

Although the Meadow Valley sandwort occurs in habitats similar to that found here it has apparently not been reported this far north in Nevada (Kartesz 1988). Waxflower (cliffbush) does apparently occupy the Highland Range, however (Miskow, pers. comm.), and its requisite habitat (Kartesz 1988) is present at this site. Nonetheless, I failed to note any cliffbush at this location.

Photo 9. Proposed Arizona Nevada Tower Corporation *Highland Peak* cell phone tower site, Highland Range, Lincoln County, Nevada. View to north.

Miskow (pers. comm.) reiterates a 1939 report of long-calyx eggvetch in the Highland Range but Kartesz (1988) does not include the locality in his report of *A. o. lonchocalyx*' range. And despite seemingly appropriate habitat here (dry hillsides and stoney flats on calcareous soils), this site's 9300 foot-plus elevation is somewhat above the 8600 foot upper level Kartesz denotes for the eggvetch. I saw no vetch (*Astragalus* sp – a reasonably distinctive group of plants) at this site and consider the eggvetch an unlikely resident in this particular locality.

This site provides no desert tortoise habitat.

Summary, Conclusions and Recommendations

Between 16 and 19 May 2006, I conducted field surveys across eight proposed cell phone tower sites along the US Highway 93 corridor between the Coyote Springs Valley and the Highland Range, near Pioche, in Lincoln County. I characterized each site physically and biologically, paying particular attention to determining if sensitive taxa are present on the sites and/or their associated utility corridors. I had previously obtained records of locally (in terms of this project) occurring sensitive taxa from the Nevada Natural Heritage Program and that information helped guide my surveys.

I found no evidence on any of the eight sites or associated utility corridors of any of the species highlighted by the Natural Heritage Program. I noted possible evidence of desert

tortoise activity adjacent to the access road connecting US Highway 93 with the Lower Pahranagat site.

Based on these surveys, it does not appear that any of the species noted in the Natural Heritage Program report – or any other species in particular – will be unduly harmed if this project is constructed. My recommendations for reducing potential impacts associated with this project follow.

1) Though desert tortoises do not apparently occupy the Coyote Springs site or its immediate surroundings, this locality is tortoise habitat. If construction is approved, I recommend this site be re-inspected immediately prior to ground disturbance. If construction occurs during the tortoise' active season (March through October), I recommend that temporary tortoise fencing be installed around this site until construction is complete.

2) Remove all cactus and yucca (State-protected species) subject to harm and transplant off-site in accordance with BLM guidelines. Cactus occupy the Coyote Springs, Alamo, Alamo Peak, Hiko Interchange and Highland Peak sites. Yucca occur on the Coyote Springs site.

3) Place the ANTC facilities in a manner that minimizes removal of trees and large shrubs at the Alamo and Highland peak sites to reduce impacts to the scenic quality of these locations.

4) Minimize tower lighting to reduce incidence of collisions with nocturnally migrating birds.

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Appendix 1: Nevada Natural Heritage Program Report

Nevada Natural Heritage Program

Nevada Natural Heritage Program

Nevada Department of Conservation and Natural Resources
Richard H. Bryan Building
901 South Stewart Street, suite 5002 • Carson City, Nevada 89701-5245, U.S.A.
tel: (775) 684-2900 • internet: http://heritage.nv.gov

11 April 2006

Alex L. Heindl
University of Nevada Las Vegas
Harry Reid Center of Environmental Studies
4505 Maryland Parkway
Las Vegas, NV 89154-4009

RE: Data request received 07 April 2006

Dear Mr. Heindl:

We are pleased to provide the information you requested on endangered, threatened, candidate, and/orat risk plant and animal taxa recorded within or near the proposed nine cell tower sites in Lincoln and Clark counties along US Highway 93 and the town of Pioche project areas. We searched our database and maps for the following a one kilometer radius around:

Township 01S	Range 66E	Section 03
Township 04S	Range 62E	Section 26
Township 04S	Range 67E	Section 17
Township 07S	Range 60E	Section 22
Township 07S	Range 61E	Section 08
Township 08S	Range 62E	Section 34
Township 12S	Range 63E	Section 07
Township 15S	Range 63E	Section 27
Township 17S	Range 63E	Section 29

The enclosed printout lists the taxa recorded within the given area. Please be aware that habitat may also be available for the Needle Mountains milkvetch, *Astragalus eurylobus*, a Nevada Bureau of Land Management (BLM) Sensitive Species; the rock purpusia, *Ivesia arizonica* var. *saxosa*, a Nevada BLM Sensitive Species; and the Arizona toad, *Bufo microscaphus*, a Nevada BLM Sensitive Species. We do not have complete data on various raptors that may also occur in the area; for more information contact Ralph Phenix, Nevada Division of Wildlife at (775) 688-1565. Note that all cacti, yuccas, and Christmas trees are protected by Nevada state law (NRS 527.060-.120), including taxa not tracked by this office.

Please note that our data are dependent on the research and observations of many individuals and organizations, and in most cases are not the result of comprehensive or site-specific field surveys. Natural Heritage reports should never be regarded as final statements on the taxa or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments.

Thank you for checking with our program. Please contact us for additional information or further assistance.

Sincerely,

Eric S. Miskow
Biologist III/Data Manager

At Risk Taxa Recorded Near the Cell Tower Sites in Clark and Lincoln Counties Project Area

Compiled by the Nevada Natural Heritage Program for UNLV, Harry Reid Center

10 April 2006

Scientific name	Common name	Usfws	Blm	Usfs	State	Srank	Grank	Lat	Long	Prec	Last observed
Plants											
Arenaria stenomeres	Meadow Valley sandwort					S2	G2	363602N	1145418W	S	1996-05-17
Arenaria stenomeres	Meadow Valley sandwort					S2	G2	363537N	1145414W	S	1982-05-15
Astragalus oophorus var. *lonchocalyx*	Long-calyx Eggvetch	xC2	N			S2	G4T2	375557N	1143206W	G	1939-04-24
Jamesia tetrapetala	Waxflower	xC2	N	S		S2	G2	375240N	1143437W	S	1989-PRE
Penstemon bicolor ssp. *roseus*	rosy twotone beardtongue	xC2	N	S		S3	G3T3Q	362644N	1145826W	M	1980-04-25
Reptiles											
Gopherus agassizii	desert tortoise (Mojave Desert pop.)	LTNL	S	T	YES	S2S3	G4	362630N	1145714W	S	1987-PRE
Gopherus agassizii	desert tortoise (Mojave Desert pop.)	LTNL	S	T	YES	S2S3	G4	371221N	1150126W	S	1987-1990

U. S. Fish and Wildlife Service (Usfws) Categories for Listing under the Endangered Species Act:

- LT — Listed Threatened - likely to be classified as Endangered in the foreseeable future if present trends continue
- x C2 — Former Category 2 Candidate, now species of concern
- NL — Not Listed (no status) in a portion of the species' range

Bureau of Land Management (Blm) Species Classification:

- S — Nevada Special Status Species - USFWS listed, proposed or candidate for listing, or protected by Nevada state law
- N — Nevada Special Status Species - designated Sensitive by State Office

United States Forest Service (Usfs) Species Classification:

- S — Region 4 (Humboldt-Toiyabe NF) sensitive species
- T — Region 4 and/or Region 5 Threatened species

Nevada State Protected (State) Species Classification:

Fauna:

- YES — Species protected under NRS 501.

Precision (Prec) of Mapped Occurrence:

Precision, or radius of uncertainty around latitude/longitude coordinates:

- S — Seconds: within a three-second radius
- M — Minutes: within a one-minute radius, approximately 2 km or 1.5 miles
- G — General: within about 8 km or 5 miles, or to map quadrangle or place name

Nevada Natural Heritage Program Global (**Grank**) and State (**Srank**) Ranks for Threats and Vulnerability:

- G — Global rank indicator, based on worldwide distribution at the species level
- T — Global trinomial rank indicator, based on worldwide distribution at the infraspecific level
- S — State rank indicator, based on distribution within Nevada at the lowest taxonomic level
  - 1 — Critically imperiled and especially vulnerable to extinction or extirpation due to extreme rarity, imminent threats, or other factors
  - 2 — Imperiled due to rarity or other demonstrable factors
  - 3 — Vulnerable to decline because rare and local throughout its range, or with very restricted range
  - 4 — Long-term concern, though now apparently secure; usually rare in parts of range, especially at its periphery
  - 5 — Demonstrably secure, widespread, and abundant
    - A — Accidental within Nevada
    - B — Breeding status within Nevada (excludes resident taxa)
    - H — Historical; could be rediscovered
    - N — Non-breeding status within Nevada (excludes resident taxa)
    - Q — Taxonomic status uncertain
    - U — Unrankable
    - Z — Enduring occurrences cannot be defined (usually given to migrant accidental birds)
    - ? — Assigned rank uncertain

APPENDIX D

RISK ASSESSMENT FOR NOXIOUS WEEDS

RISK ASSESSMENT FOR NOXIOUS WEEDS

Arizona Nevada Tower Corporation
Communication Sites in Lincoln County, Nevada

On December 18th, 2006 seven Noxious Weed Risk Assessments were completed for the Arizona Nevada Tower Corporation in regards to the Communication Site project in Lincoln County, NV. Separate risk assessments were completed for each tower site due to the fact that the towers are spread out over a large area covering much of southern Lincoln County.

Field weed surveys were not completed due to the fact that this risk assessment was completed in December making identification of most weeds both difficult and inaccurate in the field. Instead, the Ely District weed inventory data was consulted. It should be noted that inventories in Lincoln County are incomplete. So species of concern should not be limited to the ones listed in this Risk Assessment.

All project sites should follow these mitigation measures:

- All equipment used on the project will be washed with a pressure washer prior to entering the project area to remove any dirt and seed.
- If any noxious weed infestations are observed on site prior to construction, every effort will be made to avoid disturbing the population.
- Any noxious weed patches that occur in the project area as a result of the project operations will be eradicated.
- Project area will be monitored for noxious weeds for 3 consecutive years following the project operations.

Caliente Tower

The Caliente tower is a proposed cellular phone type communication facility located on a plateau south and overlooking the Township of Caliente. The proposed site is approximately .9 tenths of a mile south and 750 feet above the Township of Caliente. The right-of-way will consist of a fenced compound of approximately 10,000 square feet, encompassing a single 195 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include maintenance road(s) and utility corridor(s).

The noxious or invasive weed species found around the project area include:

Acroptilon repens	Russian Knapweed
Ailanthus altissima	Tree of Heaven
Cardaria draba	Hoary Cress / Whitetop
Cirsium vulgare	Bull Thistle
Onorpodum acanthium	Scotch Thistle
Lepidium latifolium	Perennial Pepperweed / Tall Whitetop
Tamarix spp.	Salt Cedar

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Low (3) because, while there are several noxious weed species located near the site, none occur in it. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (6). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Caliente tower is considered Moderate (18) at the present time.

Alamo Peak Tower

The Alamo Peak tower is a proposed cellular phone type communication facility located approximately 5.5 miles west of the town of Alamo, Nevada, atop Alamo Peak at an elevation of 6168 feet. The right-of-way will consist of a cellular tower site of approximately 10,000 square feet, including a single 125 foot self supporting lattice tower, equipment building, utility service panels, solar power supply and a power back-up wind generator. Because solar energy would power this site, there is no associated utility corridor.

The noxious or invasive weed species found around the project area include:

Cardaria draba	Hoary Cress /Whitetop
Lepidium latifolium	Perennial Pepperweed / Tall Whitetop
Onorpodium acanthium	Scotch Thistle
Tamarix spp.	Salt Cedar

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Low (1) because the noxious species listed above are only found along Highway 93. There are no known infestations within a six mile radius of this proposed tower site. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (4). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Alamo Peak tower is considered Low (4) at the present time.

Burnt Springs Tower

The Burnt Springs tower is a proposed cellular phone type communication facility located approximately 3.25 miles south of US Highway 93. The proposed site is approximately 14 miles east of intersection US Highway 93 and State Highway(s) 375 and 318. The right-of-way will consist of a fenced compound of approximately 10,000 square feet, encompassing a single 195 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include maintenance road(s) and utility corridor(s).

The noxious or invasive weed species found around the project area include:

Cardaria draba	Hoary Cress / Whitetop
Centaurea maculosa	Spotted Knapweed
Tamarix spp.	Salt Cedar

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Low (1) because the noxious species listed above are only found along Highway 93. There are no known infestations within a three mile radius of this proposed tower site. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (4). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Burnt Springs tower is considered Low (4) at the present time.

Alamo Town Tower

The Alamo Town tower is a proposed cellular phone type communication facility located on the west side of US Highway 93 approximately 60 miles north of the Interstate 15 and US Highway 93 interchange and just south of the town of Alamo, NV. The right-of-way will consist of a fenced compound of approximately 10,000 square feet, encompassing a single 195 foot self-supporting lattice tower, equipment building(s) and utility service panels. The right-of-way will also include a maintenance road and a utility corridor.

The noxious or invasive weed species found around the project area include:

Cardaria draba	Hoary Cress / Whitetop
Lepidium latifolium	Perennial Pepperweed / Tall Whitetop
Onorpodium acanthium	Scotch Thistle
Tamarix spp.	Salt Cedar

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Moderate (5) because given the site's proximity to the town of Alamo and Highway 93 it is foreseeable that, while no weeds are currently found at the site, there is a high likelihood of them spreading to the site. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (4). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Alamo Town tower is considered Moderate (20) at the present time.

Coyote Springs Tower

The Coyote Springs tower is a proposed cellular phone type communication facility located on the west side of US Highway 93 approximately 30 miles north of the Interstate 15 and US Highway 93 interchange. The right-of-way will consist of a fenced compound of approximately 10,000 sq.ft., encompassing a single 195 foot self-supporting lattice tower, equipment building(s) and utility service panels. The right-of-way will also include a maintenance road and a utility corridor.

The noxious or invasive weed species found around the project area include:

Acroptilon repens	Russian Knapweed
Tamarix spp.	Salt Cedar

In addition to these species there is also a high probability that there is some species of Bromus (cheatgreass, red brome, etc.), Schismus (Mediterranean grass), and Brassica tournefortii (Sahara Mustard) in the area.

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Moderate (6) because given the site's proximity to the Coyote Springs development and Highway 93 it is foreseeable that, while no weeds are currently found at the site, there is a high likelihood of them spreading to the site. Plus, this site occurs in the only area in the District that is infested with Sahara mustard, a species which can spread rapidly. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (4). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Coyote Springs tower is considered Moderate (24) at the present time.

Hiko Interchange Tower

The Hiko Interchange tower is a proposed cellular phone type communication facility located on the north side of State Highway 375 approximately 2.5 miles west of US Highway 93 and State Highway 375 and 318 intersections. The proposed site is approximately 15 miles north of the Township of Alamo. The right-of-way will consist of a fenced compound of approximately 10,000 square feet, encompassing a single 195 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include maintenance road(s) and utility corridor(s).

Cardaria draba	Hoary Cress / Whitetop
Centaurea maculosa	Spotted Knapweed
Onorpodum acanthium	Scotch Thistle
Lepidium latifolium	Perennial Pepperweed / Tall Whitetop
Tamarix spp.	Salt Cedar

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Moderate (4) because given the site's proximity to Highway 375 it is foreseeable that, while no weeds are currently found at the site, there is a high likelihood of them spreading to the site. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (4). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Hiko Interchange tower is considered Moderate (12) at the present time.

Highland Peak Tower

The Highland Peak tower right-of-way will consist of a cellular tower site of approximately 10,000 square feet, including a single 125 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include an existing maintenance road(s) and utility corridor(s).

Centaurea maculosa	Spotted Knapweed
Onorpodum acanthium	Scotch Thistle
Tamarix spp.	Salt Cedar

Factor 1 assesses the likelihood of noxious/invasive weed species spreading to the project area.

None (0)	Noxious weed species are not located within or adjacent to the project area. Project activity is not likely to result in the establishment of noxious weed species in the project area.
Low (1-3)	Noxious weed species are present in the areas adjacent to but not within the project area. Project activities can be implemented and prevent the spread of noxious weeds into the project area.
Moderate (4-7)	Noxious weed species located immediately adjacent to or within the project area. Project activities are likely to result in some areas becoming infested with noxious weed species even when preventative management actions are followed. Control measures are essential to prevent the spread of noxious weeds within the project area.
High (7-10)	Heavy infestations of noxious weeds are located within or immediately adjacent to the project area. Project activities, even with preventative management actions, are likely to result in the establishment and spread of noxious weeds on disturbed sites throughout much of the project area.

This project site rates as Moderate (7) because there are three Scotch thistle infestations at the top of Highland Peak. Project activities should be able to be implemented without infesting new areas with noxious weeds as long as the mitigation measures are followed.

Factor 2 assesses the consequences of noxious weed establishment in the project area.

Low to Nonexistent (1-3)	None. No cumulative effects expected.
Moderate (4-7)	Possible adverse effects on site and possible expansion of infestation within the project area. Cumulative effects on native plant communities are likely but limited.
High (7-10)	Obvious adverse effects within the project area and probable expansion of noxious weed infestations to areas outside the project area. Adverse cumulative effects on native plant communities are probable.

For this project site, the factor rates as Moderate (4). This means that there are possible adverse effects of spreading noxious weeds in the project area. Cumulative effects on native plant communities are likely but limited. The main concern is transporting weeds into an area that is currently considered weed free.

The Risk Rating is obtained by multiplying Factor 1 by Factor 2.

None (0)	Proceed as planned.
Low (1-10)	Proceed as planned. Initiate control treatment on noxious weed populations that get established in the area.
Moderate (11-49)	Develop preventative management measures for the proposed project to reduce the risk of introduction of spread of noxious weeds into the area. Preventative management measures should include modifying the project to include seeding the area to occupy disturbed sites with desirable species. Monitor the area for at least 3 consecutive years and provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.
High (50-100)	Project must be modified to reduce risk level through preventative management measures, including seeding with desirable species to occupy disturbed site and controlling existing infestations of noxious weeds prior to project activity. Project must provide at least 5 consecutive years of monitoring. Projects must also provide for control of newly established populations of noxious weeds and follow-up treatment for previously treated infestations.

The Risk Rating for the Highland Peak site is considered Moderate (28) at the present time.

Reviewed by: _____ _____

Bonnie Waggoner, Weed Coordinator Date

APPENDIX E

VISUAL RESOURCE CONTRAST RATING REPORTS

VISUAL RESOURCE CONTRAST RATING REPORT FOR THE ALAMO COMMUNICATION SITE IN LINCOLN COUNTY NEVADA

N-80509

Submitted to
Bureau of Land Management
Ely, Nevada Field Office

Prepared by:

Arizona Nevada Tower Corp.
1641 East Sunset Road Suite B-111
Las Vegas, Nevada 89119
(702) 454-2682

September 7, 2006

1) Introduction

Arizona Nevada Tower Corporation submitted a right-of-way application, serialized by the Ely Field Office of the Bureau of Land Management for a Communication Facility on Federal lands in Lincoln County, Nevada in approximation to U.S. Highway 93 and the Town of Alamo. The right-of-way was precipitated by the determination that additional communication facilities are required to expand cellular phone service along U.S. Highway 93 north of the Las Vegas metropolitan area.

2) Project Description

The requested right-of-way consists of a site type for communication facilities (Alamo Communication Site) for a period consistent with those issued by the Bureau of Land Management. Currently, the proposed structure is for a cellular phone type communication facility located on the west side of US Highway 93 approximately 60 miles north of the Interstate 15 and US Highway 93 interchange (Figure 1). The right-of-way will consist of a fenced compound of approximately 10,000 sq.ft., encompassing a single 195 foot self-supporting lattice tower, equipment building(s) and utility service panels. The right-of-way will also include a maintenance road and a utility right-of-way, (Figure 2).

2.1 Site Characteristics: The proposed site is approximately ¼ Acre, located some 500 feet west of US Highway 93 and .03 miles south of Broadway Street, Alamo, Nevada. The site sits on an undisturbed area located south of an existing water tank which supplies the Community of Alamo, the area(s) north, west and south of the proposed site are disturbed and the area east of the site remains undisturbed. The proposed site sits atop a knoll south of the township of Alamo, having an existing water tank (north of proposed site) and an existing small communication facility. The knoll has existing access roads from the north and south and traversing the apex of the knoll. The site elevation is approximately 3645 feet and is situated on an eight foot grade from south to north. The surface of the knob consists mainly of lava strewn rocks and small boulders with little to no surface soil.

2.2 Tower: The site will consist of a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), overhead and underground cable runs between tower and equipment building(s), underground lighting protection conductors connected to tower and equipment building, and 6 foot chain link fencing with barb wire strands atop enclosing site.

2.3 Building: An overall completed building dimension should approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) will be placed in phases as required by tower users. The building(s) will be situated 5 feet from and parallel to enclosure chain link fencing along the side.

2.4 Utilities: Power will be supplied from an existing overhead power line located north and west of the proposed site and lying at the base of the knoll. The site power service will be supplied overhead and traverse up the west side of the knoll to its termination at the site then underground or overhead as may be determined by the supplying utility or local building code.

2.5 Maintenance Road: Currently there is existing dirt access road approximately 25 foot wide leading from U.S. Highway 93 from the south or northerly direction and traversing the apex of the knoll and lying west of the proposed site.

2.6 Construction: Disturbance associated with grading, grubbing and leveling will be major due to the grade and character of the proposed site. The site will require leveling along it northwest southeast axis approximately minus six feet and minus four feet along the northeast southwest axis. Areas requiring improved work surfaces (tower, building(s), maintenance road, utility service and fenced compound) may be totally disturbed during construction. When possible, construction equipment and service vehicles will drive over/around vegetation and avoid damaging any perennial plants.

2.7 Reclamation Efforts: Whenever possible, plants will be salvaged, stockpiled and placed back within the right-of-way after construction activities are completed.

2.8 Operation: Once operational it is anticipated that onsite inspections of the site would occur at a minimum of once every 3 months. All maintenance or repairs would be completed as needed and would be confined mainly to the tower and or equipment building(s) within the fenced enclosure and accessed from the maintenance road.

2.9 Future Land Use(s): The proposed site is situated approximately less than 1 mile south of the township of Alamo adjacent to U.S. Highway 93. The area west and southwest is currently farm land, the area north and northwest is the township of Alamo, the area east, southeast and northeast is comprised of both private and public lands, and the area south is private land. Therefore, it is likely that the lands surrounding the site will be developed to some extent in the future.

3) Visual Resources Management Objective (VRM)

As identified in the Department of Interior, Bureau of Land Management Visual Resource Contrast Rating manual 8431, Appendix 2 – VRM Class Objectives, Class III Objectives states "The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basis elements found in the predominant natural features of the characteristic landscape."

4) Key Observation Points (KOP)

Based on ground reconnaissance the closest observation points were along US Highway 93 (Figure 3). Two KOP's were established, one mile north and south, and each selected to avoid locations that were on the periphery or outside the straight ahead view of drivers and passengers of vehicles.

> **KOP 1: This location is approximately 3,450 feet in elevation and one mile north of proposed site (Figure 4).**
>
> **KOP 2: This location is approximately 3,450 feet in elevation and one mile south of proposed site (Figure 5).**
>
> **Note: Additional views are presented from various points north of the site which are included for reference only.**

Both observation points offer a relatively unobstructed view of the proposed tower and equipment shelter.

5) Visual Simulation

The following pictures (Figures 6 and 7) provide a visual representation of the current conditions at the proposed site and pictures of an existing completed tower located along US Highway 95 approximately 25 miles north of Beatty, Nevada with similar characteristics in color, texture, background height and native rock. The completed tower pictures offer an actual representation of the potential impact on the proposed site and are substituted for simulation or interpretation.

6) Contrast Rating

Information for the contrast rating was compiled from utilization of Visual Contrast Rating Worksheet Form 8400-4 and prepared for each KOP (Attachment A).

Currently, the linear and banding nature of the highway corridor is a dominate presence from both north and south bound views along U.S. Highway 93. The private development(s) north, south and west of the proposed site provide contrast to the natural surrounding characteristics. The water tank sitting on the knoll and north of the proposed site provides an additional distraction to the highway periphery and is attractive to the casual viewer from the north and to a lesser extent from the south. The signage and development to the north and south of the proposed site also provide attractive features to the casual viewer. The closest development that encroaches on and obscures the natural landscape starts approximately 6 miles south of site and abuts U.S. Highway 93 on the west and continues to approximately 7 miles north of the site and the Township of Alamo. Between the proposed project area and the north south limits mentioned above the

visual contrasts are power lines running parallel too and crossing the highway, driveway access roads, paved roads, buildings (residential and commercial), business signs, billboards, non-indigenous vegetation and other characteristics of urban development creating a banding effect along U.S. Highway 93 and harsh lines with moderate to severe color changes.

Visual impacts associated with the proposed project are anticipated to be long term in nature due to the fact that the site sits on a prominent knoll south of the township of Alamo and is unlikely to be developed in any manner due to its vertical rise. Surrounding private lands may become available for development but its unknown if the surrounding public lands will be placed on a land disposal program with-in the life cycle of the project, therefore it is anticipated that the project will be a recognizable feature for an extended period of time other than the above mentioned development(s) and other associated characteristics .

The following section presents the analysis, for each KOP and the potential impacts the proposed project may have on the Visual Resource Features (landscape, vegetation and structures) in three categories (foreground, mid-ground and background) which correspond to their proximity to the KOP and the horizon. Foreground was defined as extending from the KOP to approximately half way to the project site, the background as the mountains and sky and the mid-ground as the area in between.

6.1) KOP 1 / KOP2

Due to the short distances between the views (approximately 2 miles) the analyses were combined for KOP1 and KOP2. Where differences are determined they are noted as to the viewing point.

6.1.1 Landscape:

Foreground: The proposed project may be a component of the foreground and is expected to have some impact. The line contrast element was identified due to the open expanse and gentle slope of the land and the elevated position of the proposed site. The banding affect created by US Highway 93 is obvious and provides a bold contrast to the surrounding disturbed and undisturbed areas. The areas south and north of the proposed project are inferior to the site and the area east of the proposed site sits level to the site. This element is considered to be weak due to the distance and varied landscape between the foreground and mid-ground.

Mid-Ground: The proposed project (Tower, Shelter, and Fencing) is a component of the mid-ground and expected to have some impact on the landscape. The inferior landscape from the highway to the project site will create an unobstructed view of the proposed project. The conspicuous water tank situated north of the proposed project and on the same knoll west of U.S. Highway 93 will create differentiating textures ranging from a smooth circular object to the

vertical element of the knoll and the naturally occurring lava outcropping and small vegetation. The textures being so diverse, from a man made structures to those naturally occurring and are expected to be moderate. Color element impacts are expected to be moderate, since the silver/grey color of the tower will blend with the tan to gray hues present in the mid-ground but contrast to the painted water tank north or the proposed project. The tall threadlike nature of the tower is expected to provide a contrast to the topographic relief and vertical rise of the knoll in contrast to the gentle slopes which are present in the mid-ground. Due to the existing banding effect created by the road-way, urban development, fencing, access roads, as well as, the distance from the KOP's, it is unlikely that the casual viewer will be immediately attracted to the tower, but the tower will be visible from the KOP's. A temporary contrast rating of moderate was determined to be appropriate for the form element.

Background: The proposed tower is not a component of the back-ground but the line, form and color elements extend into the landscape. The vertical angular nature of the tower will be silhouetted against the sky at KOP2, and should extend into the mountain and sky interface at KOP1. The extended distance between the proposed project and the background (KOP1 and 2) may appear to extend into the background and the mountain sky interface. The silver/gray color of the tower will contrast against the tan, dark gray, lava-black and sky blue colors present in the background. These visual components provide an obvious contrast. However, due to the threadlike nature of the tower and the background not being obscured, the contrast rating was determined to be moderate for line, form and color elements.

6.1.2 Vegetation

Foreground: The proposed tower is not a component of the foreground and therefore is not expected to have any impact. The tan to pastel green colors, short and tall vegetation do not contribute to any of the contrast elements.

Mid-Ground: The knolls, tan to pastel green colors, and compact vegetation do not contribute to any of the contrast elements. The visible portion of the tower does not disrupt the vegetation component of the visual landscape.

Background: The background ranges from the undeveloped naturally occurring colors (tan to pastel green) to the developed with a diverse range of vegetation varying from native species to non-indigenous trees and agricultural crops. The proposed project does not disrupt the visual landscape.

6.1.3 Structures

Foreground: The proposed tower is not a component of the foreground and is not expected to have an impact. The transmission line(s), highway and urban development are present in the foreground, no other structures are present.

Mid-Ground: As the tower is an engineered component and unlike any natural feature, some degree of contrast is expected. It is anticipated due to the

superior position of the site, that the proposed project including tower, fencing and equipment building(s) on the site will be visible from US Highway 93, but peripheral to the focal affect of the highway from KOP 2, and prominent to the viewer from KOP 1 in addition to the water tank situated on the knoll. Therefore, a temporary contrast rating of moderate was determined to be appropriate for form and line and weak for color and texture.

Background: The proposed tower is not a component of the background but the tower silhouette is expected to have some impact on the form, line and color elements. Due to the distances to the background and proportionate size of the tower, the form, line and color element were determined to be weak in nature. There are no other structures present.

7.1) Mitigation Measures

The following measures should be implemented to reduce any potential impacts:

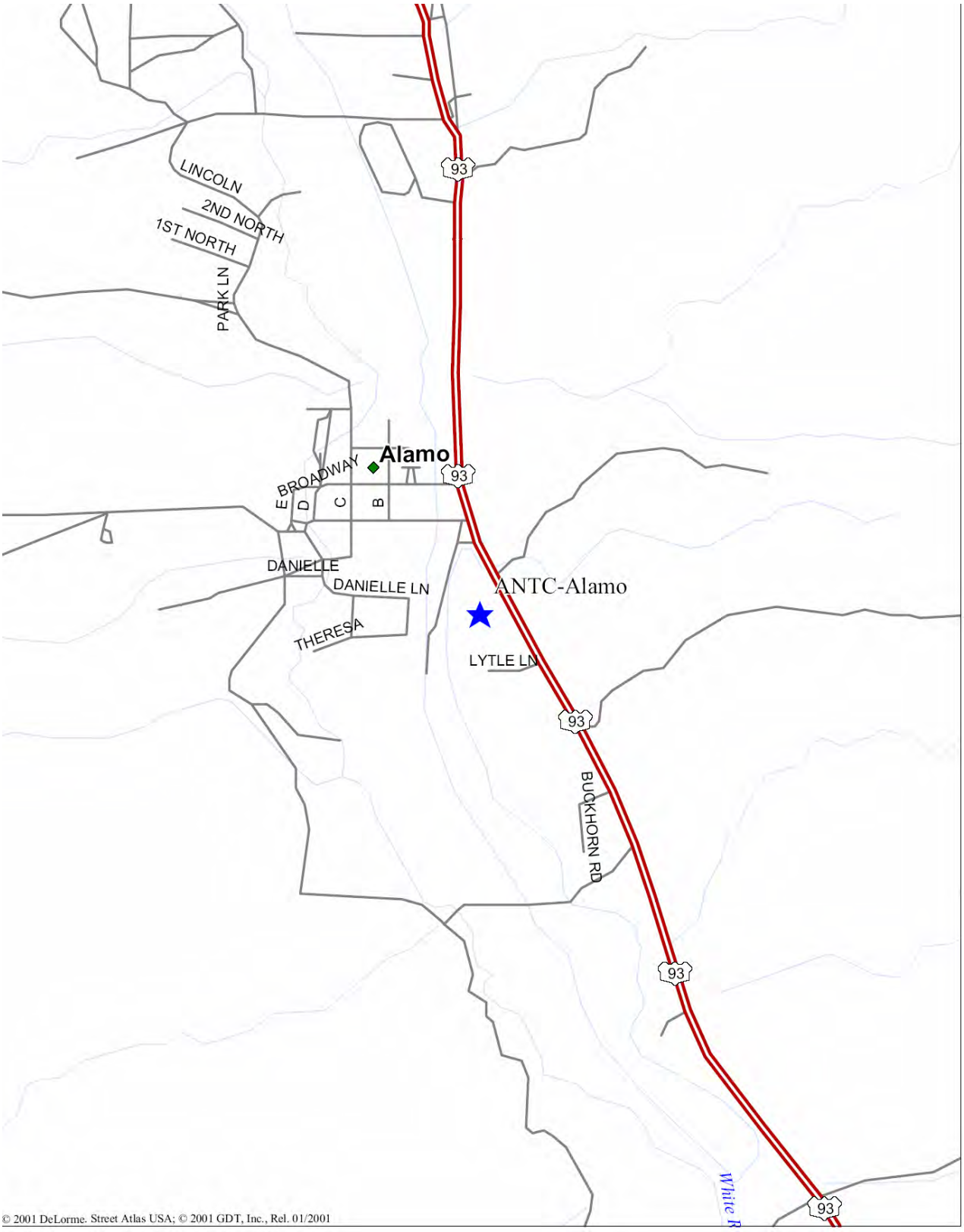
1. **Tower should be grey/silver in color to blend with surrounding landscape or a tan coloration to match the existing water tank situated on the knoll.**
2. **Minimize new surface disturbances to avoid large open areas which contrast to the undisturbed areas.**
3. **Equipment buildings should be tan to medium brown in color to blend with mid-ground and background colors.**

8.1) Findings/Conclusions

These findings are based on site reconnaissance, visual simulation, visual comparison of existing sites with similar characteristics, visual contrast analysis and would meet the management objectives for a Class III VRM area.

The proposed communication facility consists of a 100' x 100' fenced compound containing a tower, equipment building and utility pedestal. The site is accessed by exiting US Highway 93 to a dirt road and sits at superior position to the viewer. The facility sits on a knoll adjacent to U.S. Highway 93.

The analysis of the findings did not identify any of the contrast elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the ever-present transmission line, urban development (Alamo and surrounding development), water tank on knoll and the strong contrast associated with the mountains in the background of both KOP's, will attract more attention from the viewer than the proposed communication facility. The limited impacts will be long term in duration but could be lessened by the development of the land adjacent to the project should the lands be made available.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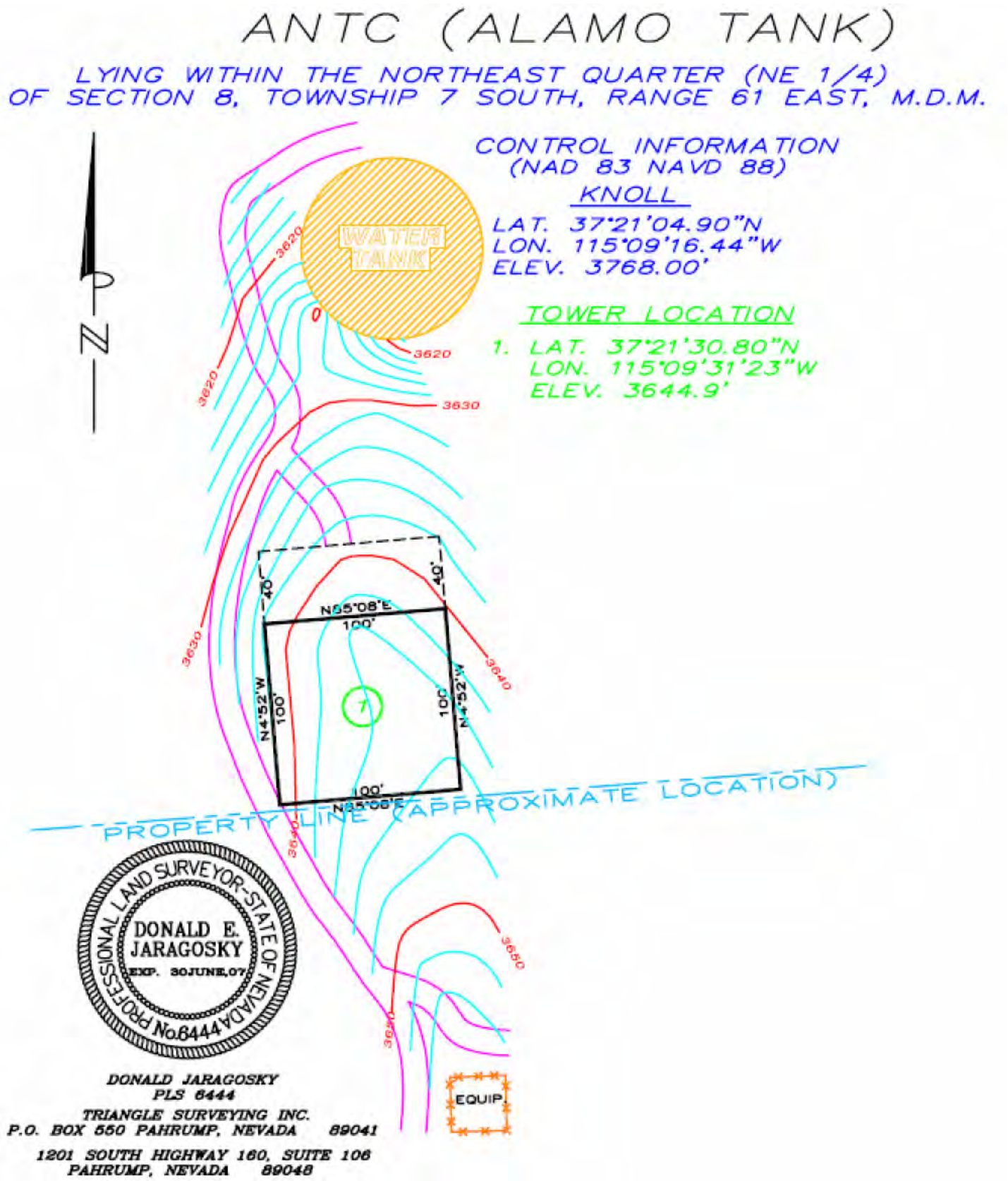
1ST NORTH
PARK LN
93
Alamo
E BROADWAY
D
C
B
93
DANIELLE
DANIELLE LN
ANTC-Alamo
THERESA
LYTLE LN
93
BUCKHORN RD
93
93
© 2001 DeLorme. Street Atlas USA; © 2001 GDT, Inc., Rel. 01/2001

Figure 1


ANTC (ALAMO TANK)
LYING WITHIN THE NORTHEAST QUARTER (NE 1/4)
OF SECTION 8, TOWNSHIP 7 SOUTH, RANGE 61 EAST, M.D.M.
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(NAD 83 NAVD 88)
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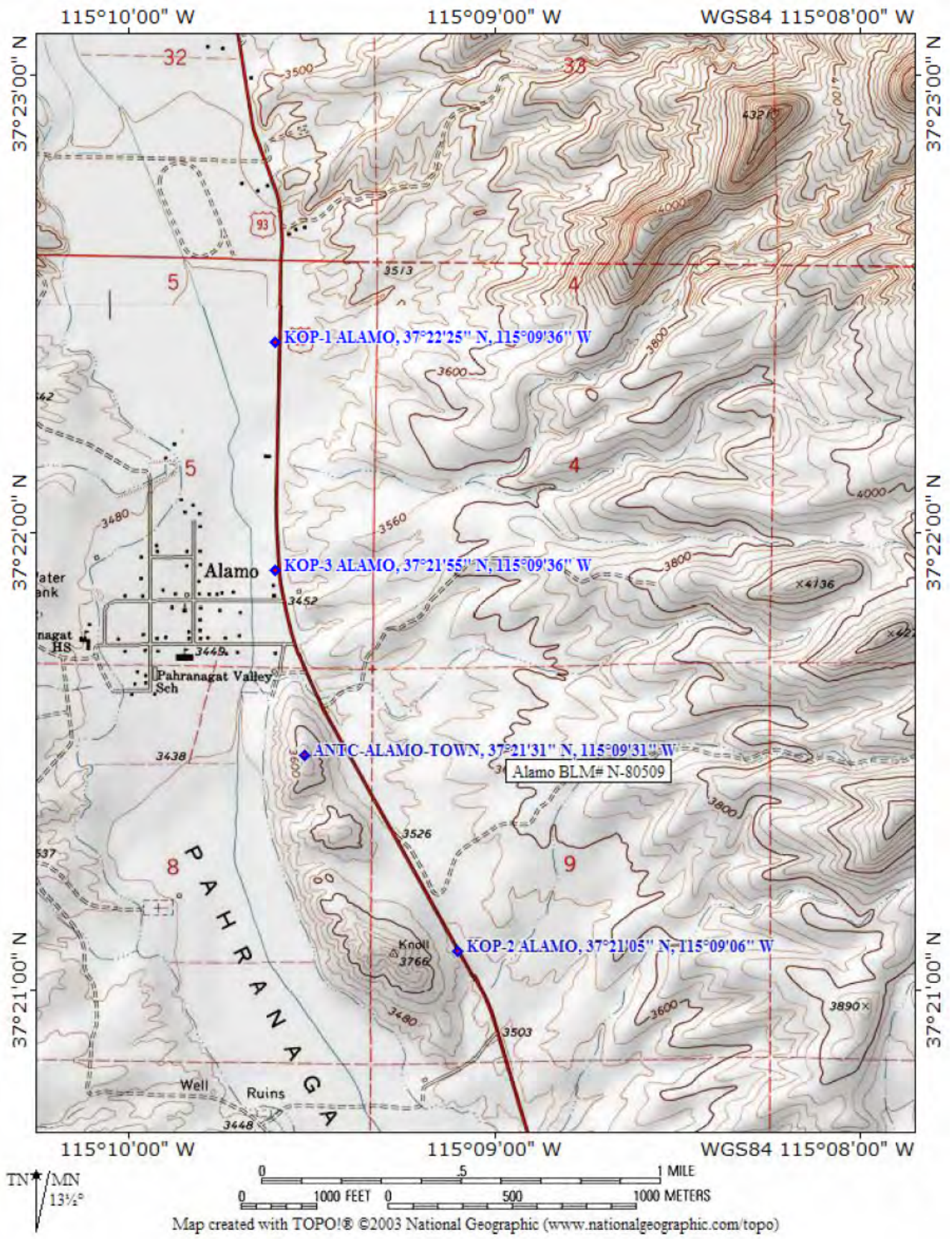
LON. 115°09'16.44"W
ELEV. 3768.00'
TOWER LOCATION
1. LAT. 37°21'30.80"N
LON. 115°09'31'23"W
ELEV. 3644.9'
WATER TANK
N
3620
3630
3640
3650
40'
N55°08'E
100'
N4°52'W
100'
PROPERTY LINE (APPROXIMATE LOCATION)
PROFESSIONAL LAND SURVEYOR-STATE OF NEVADA
DONALD E. JARAGOSKY
EXP. 30 JUNE, 07
No. 6444
DONALD JARAGOSKY
PLS 6444
TRIANGLE SURVEYING INC.
P.O. BOX 550 PAHRUMP, NEVADA 89041
1201 SOUTH HIGHWAY 160, SUITE 106
PAHRUMP, NEVADA 89048
EQUIP.

Figure 2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115°09'00" W
WGS84 115°08'00" W
37°23'00" N
37°22'00" N
37°21'00" N
KOP-1 ALAMO, 37°22'25" N, 115°09'36" W
KOP-3 ALAMO, 37°21'55" N, 115°09'36" W
ANTC-ALAMO-TOWN, 37°21'31" N, 115°09'31" W
Alamo BLM# N-80509
KOP-2 ALAMO, 37°21'05" N, 115°09'06" W
Alamo
Pahranagat Valley Sch
PAHRANAGA
Knoll 3766
Well
Ruins
TN
MN
13½°
0 .5 1 MILE
0 1000 FEET 0 500 1000 METERS
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

Figure 3

Key Observation Point 1. This photograph represents the current visual landscape

Figure 4

Key Observation Point 2. This photograph represents the current visual landscape

Figure 5

Key Observation Point 3. This photograph represents the current visual landscape

Figure 5a

Figure 6

Key Observation Point 1. This photographic simulation represents what the visual landscape may look like following the completion of the project the red brick building is not part of site.

This Vantage Point for South Bound Traffic. This photograph was taken from US Highway 95 of a site that ANTC owns and operates on B.L.M. Land. This photo was taken approximately ¼ mile north of site.

Figure 7

Key Observation Point 2. This photographic simulation represents what the visual landscape may look like following the completion of the project.

This Vantage Point for North Bound Traffic. This photograph was taken from US Highway 95, of a site that ANTC owns and operates on B.L.M. Land. This photograph shows the impact of the tower on the site. This picture is approximately ¼ of mile south of the site.

This photograph represents how the communication site appeared prior to installation of the tower, fence and utility pedestal.

Figure 7 a

The follow six pictures represent what in an actual setting the tower facility would look like on flat land. The pictures are a communication facility built north of Tonopah, Nevada. As can be seen the tower fades from sight fairly quickly.

Tower in the picture above is approximately 800 feet away.

Tower in picture above is approximately 2 tenths of mile away.

Tower in picture above is approximately 4/10 of mile away

Tower in picture above is approximately ½ mile away.

Tower above is approximately 6/10 mile away.

Tower in picture above is approximately 1 mile away.

VISUAL RESOURCE CONTRAST RATING REPORT FOR THE BURNT SPRINGS COMMUNICATION SITE IN LINCOLN COUNTY NEVADA

N-80390

Submitted to
Bureau of Land Management
Ely, Nevada Field Office

Prepared by:

Arizona Nevada Tower Corp.
1641 East Sunset Road Suite B-111
Las Vegas, Nevada 89119
(702) 454-2682

September 19, 2006

1) Introduction

Arizona Nevada Tower Corporation submitted a right-of-way application, serialized by the Ely Field Office of the Bureau of Land Management for a Communication Facility on Federal lands in Lincoln County, Nevada near the US Highway 93, and Pahroc Summit Pass. The right-of-way was precipitated by the determination that additional communication facilities are required to expand cellular phone service within the coverage area.

2) Project Description

The requested right-of-way consists of a site type for communication facilities (Burnt Springs Communication Site) for a period consistent with those issued by the Bureau of Land Management. Currently, the proposed structure is for a cellular phone type communication facility located approximately 3.25 miles south of US Highway 93. The proposed site is approximately 14 miles east of intersection US Highway 93 and State Highway(s) 375 and 318, (Figure 1). The right-of-way will consist of a fenced compound of approximately 10,000 sq.ft., encompassing a single 195 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include maintenance road(s) and utility right-of-way(s), (Figure 2).

2.1 Site Characteristics: The proposed site is approximately ¼ Acre, located some 3.25 miles south of US Highway 93 in an undisturbed area. The vicinity south of the proposed site has a stock corral equipped with a loading chute and barbed wire fencing and remains disturbed from livestock movement and dirt access road to service the livestock and access to grazing. Wooden power poles associated with an overhead transmission line which runs in an east to west direction and abuts the south edge of the proposed site (operational) and a dirt access road(s) accessed from US Highway 93 and runs on the west side of the proposed site. The site elevation is approximately 5050 feet and sits on a flat area.

2.2 Tower: The site will consist of a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), overhead and underground cable runs between tower and equipment building(s), underground lighting protection conductors connected to tower and equipment building, and 6 foot chain link fencing with barb wire strands atop enclosing site.

2.3 Building: An overall completed building dimension should approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) will be placed in phases as required by tower users. The building(s) will be situated 5 feet from and parallel to enclosure chain link fencing along the side.

2.4 Utilities: Power will be supplied from an existing overhead power line which abuts the site on the south side. The site power service will be supplied overhead utilizing existing or new maintenance road(s) and terminates at the site then run

overhead or underground as may be determined by the supplying utility or local building code.

2.5 Maintenance Road: Currently there is existing dirt access road approximately 25 foot wide leading from the highway and proceeding past the west edge of the proposed site.

2.6 Construction: Disturbance associated with grading and or grubbing will be minimal due to the relative flat nature of the site. Areas requiring improved work surfaces (tower, building(s), maintenance road, utility service and fenced compound) may be totally disturbed during construction. When possible, construction equipment and service vehicles will drive over/around vegetation and avoid damaging any perennial plants.

2.7 Reclamation Efforts: Whenever possible, plants will be salvaged, stockpiled and placed back within the right-of-way after construction activities are completed.

2.8 Operation: Once operational it is anticipated that onsite inspections of the site would occur at a minimum monthly. All maintenance or repairs would be completed as needed and would be confined mainly to the tower and or equipment building(s) within the fenced enclosure and accessed from the maintenance road.

2.9 Future Land Use(s): The proposed site is situated approximately 3.25 miles south of US Highway 93 on public property and 14 miles east of the US Highway 93 and State Highway 375 and 318 intersection. The lands surrounding the proposed site are all public lands. Therefore, it is unlikely that the surrounding lands will be developed within the immediate future.

3) Visual Resources Management Objective (VRM)

As identified in the Department of Interior, Bureau of Land Management Visual Resource Contrast Rating manual 8431, Appendix 2 – VRM Class Objectives, Class III Objectives states "The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basis elements found in the predominant natural features of the characteristic landscape."

4) Key Observation Points (KOP)

Based on ground reconnaissance the closest observation point was along US Highway 93 and the dirt access road, (Figure 3). One KOP was established, 3.25 north of the proposed site, and it was selected as the nearest point of view yet in the periphery of the straight ahead view of drivers and passengers of vehicles.

KOP 1: This location is approximately 4,960 feet in elevation and three and a quarter miles south of proposed site (Figure 4).

The observation point offers a relatively unobstructed view of the proposed tower and equipment shelter.

5) Visual Simulation

The following pictures (Figures 5) provide a visual representation of the current conditions at the proposed site and visual simulation of the proposed site.

6) Contrast Rating

Information for the contrast rating was compiled from utilization of Visual Contrast Rating Worksheet Form 8400-4 and prepared for each KOP (Attachment A).

Currently, the linear and banding nature of the highway corridor is a dominate presence from both east and west bound views along US Highway 93. The black roadway, yellow and white striping, cleared highway shoulder, highway signs and other disturbed areas along the highway periphery, provide contrast to the natural characteristics in the area. Currently the closest development that encroaches on and obscures the natural landscape is approximately 14 miles west of the site (Crystal Springs) US Highway 93 and State Highway 375. Between the proposed project area and the interchange mentioned above, the visual contrasts are natural excepting the presence of highway fencing. There are numerous dirt trails leading away from the highway creating a banding effect and harsh lines with moderate color changes.

Visual impacts associated with the proposed project are anticipated to be long term in nature due to the fact that the site is in a remote area and little to no private lands are available for development and its unknown if the surrounding public lands will be placed on a land disposal program with-in the life cycle of the project. It is anticipated that the project will be the only development within the area for an extended period of time.

The following section presents the analysis for the single KOP and the potential impacts the proposed project may have on the Visual Resource Features (landscape, vegetation and structures) in three categories (foreground, mid-ground and background) which correspond to their proximity to the KOP and the horizon. Foreground was defined as extending from the KOP to approximately half way to the project site, the background as the mountains and sky and the mid-ground as the area in between.

6.1) KOP 1

Due to the distance from US Highway 93 to the proposed site and the distant background we have limited the limited analyses to one KOP.

6.1.1 Landscape:

Foreground: The proposed project is not a component of the foreground and is not expected to have any impact. The line contrast element was identified due to the open expanse and gentle slope of the land. The banding affect created by US Highway 93 is obvious and provides a bold contrast to the surrounding undisturbed areas.

Mid-Ground: The proposed project (Tower, Shelter, and Fencing) is a component of the mid-ground and expected to have some impact on the landscape. The level landscape from the highway to the project site will have an unobstructed view of the proposed site and all structures above ground level. Therefore, the tower and shelter components of the site should be viewable and are expected to have a weak impact on the texture elements. Color element impacts are expected to be weak, since the silver/grey color of the tower will blend with the tan to gray hues present in the mid-ground. The tall threadlike nature of the tower is expected to provide a weak contrast to the lack of topographic relief and gentle slopes which are present in the mid-ground. Due to the existing banding effect created by the road-way, transmission line, fencing and dirt roads, as well as, the distance from the KOP it is unlikely that the casual viewer will be immediately attracted to the tower, but the tower will be visible from the KOP. A temporary contrast rating of weak was determined to be appropriate for the form element.

Background: The proposed tower is not a component of the back-ground but the line, form and color elements extend into the landscape. The vertical angular nature of the tower will be silhouetted against the mountains in the background at the KOP, and will not extend into the mountain and sky interface. The silver/gray color of the tower will contrast against the tan/dark gray/lava-black colors present in the background. These visual components provide an obvious contrast. However, due to the threadlike nature of the tower and the background not being obscured, the contrast rating was determined to be weak for line, form and color elements.

6.1.2 Vegetation

Foreground: The proposed tower is not a component of the foreground and therefore is not expected to have any impact. The tan to pastel green colors and short vegetation do not contribute to any of the contrast elements.

Mid-Ground: The disbursed, tan to pastel green colors, and compact vegetation do not contribute to any of the contrast elements. The visible portion of the tower does not disrupt the vegetation component of the visual landscape.

Background: No vegetation is visible.

6.1.3 Structures

Foreground: The proposed tower is not a component of the foreground and is not expected to have an impact. The transmission line and highway are present in the foreground, no other structures are present.

Mid-Ground: As the tower is an engineered component and unlike any natural feature, some degree of contrast is expected. It is anticipated due to the level nature of the proposed site, that all the components (tower, shelter, fencing and electrical service line) will be visible from US Highway 93 but peripheral to the focal affect of the highway. Therefore, a temporary contrast rating of weak was determined to be appropriate for form, line, color and texture.

Background: The proposed tower is not a component of the background but the tower silhouette is expected to have some impact on the form, line and color elements. Due to the distances to the background and proportionate size of the tower, the form, line and color element were determined to be weak in nature. There are no other structures present.

7.1) Mitigation Measures

The following measures should be implemented to reduce any potential impacts:

1. **Tower should be grey/silver in color to blend with surrounding landscape.**
2. **Minimize new surface disturbances to avoid large open areas which contrast to the undisturbed areas.**
3. **Equipment buildings should be tan to medium brown in color to blend with mid-ground and background colors.**

8.1) Findings/Conclusions

These findings are based on site reconnaissance, visual simulation, visual comparison of existing sites with similar characteristics, visual contrast analysis and would meet the management objectives for a Class III VRM area.

The proposed communication facility consists of a 100’ x 100’ fenced compound containing a tower, equipment building and utility pedestal. The site is accessed by exiting US Highway 93 to a dirt road and sits in a horizontal position to the viewer.

The analysis of the findings did not identify any of the contrast elements as being stronger than a weak rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the ever-present transmission line and the strong contrast associated with the mountains in the background of the KOP, will attract more attention from the viewer than the proposed communication facility. The limited impacts will be long term in duration but could be lessened by the development of the land adjacent to the project should the private or public lands be made available for development.

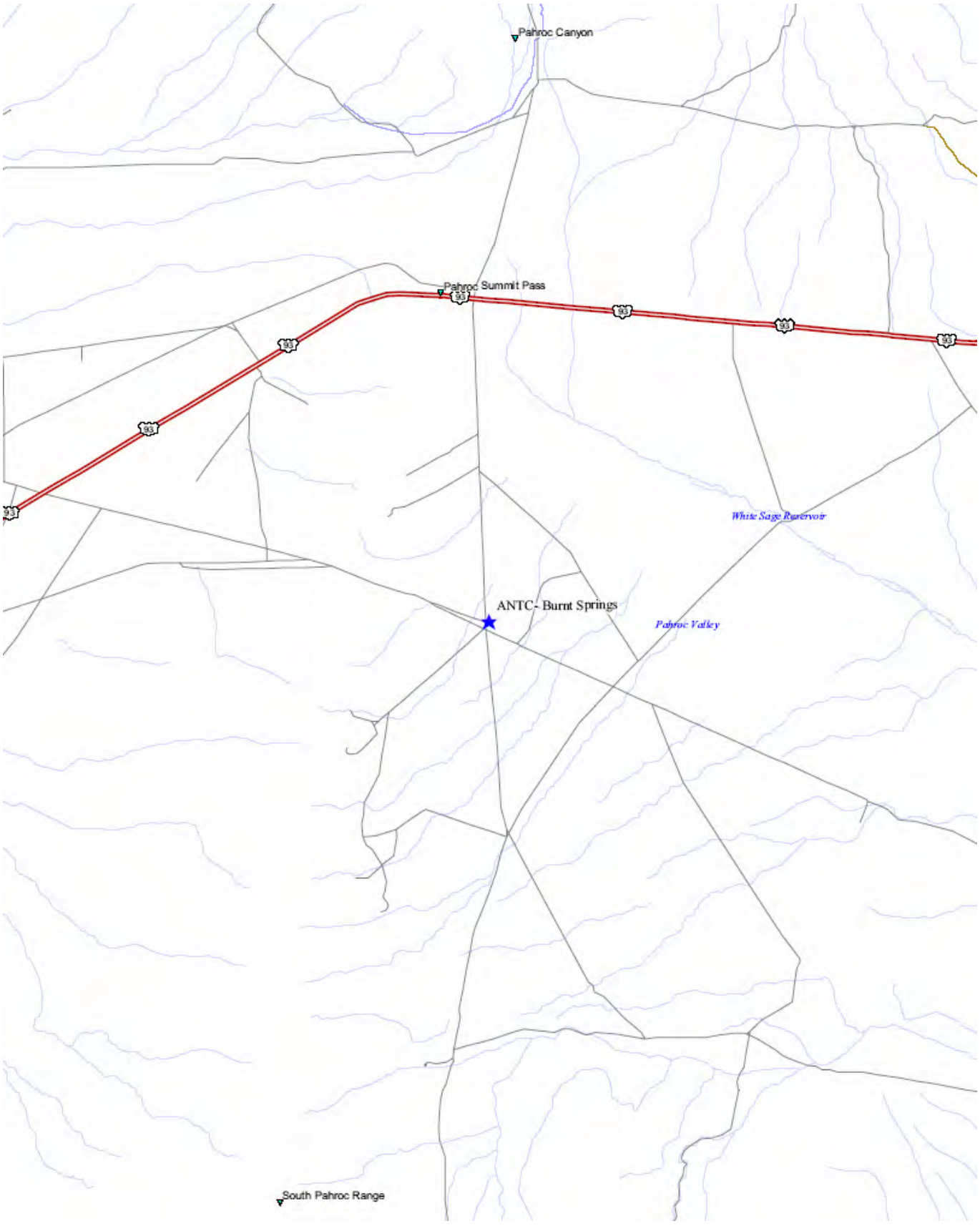
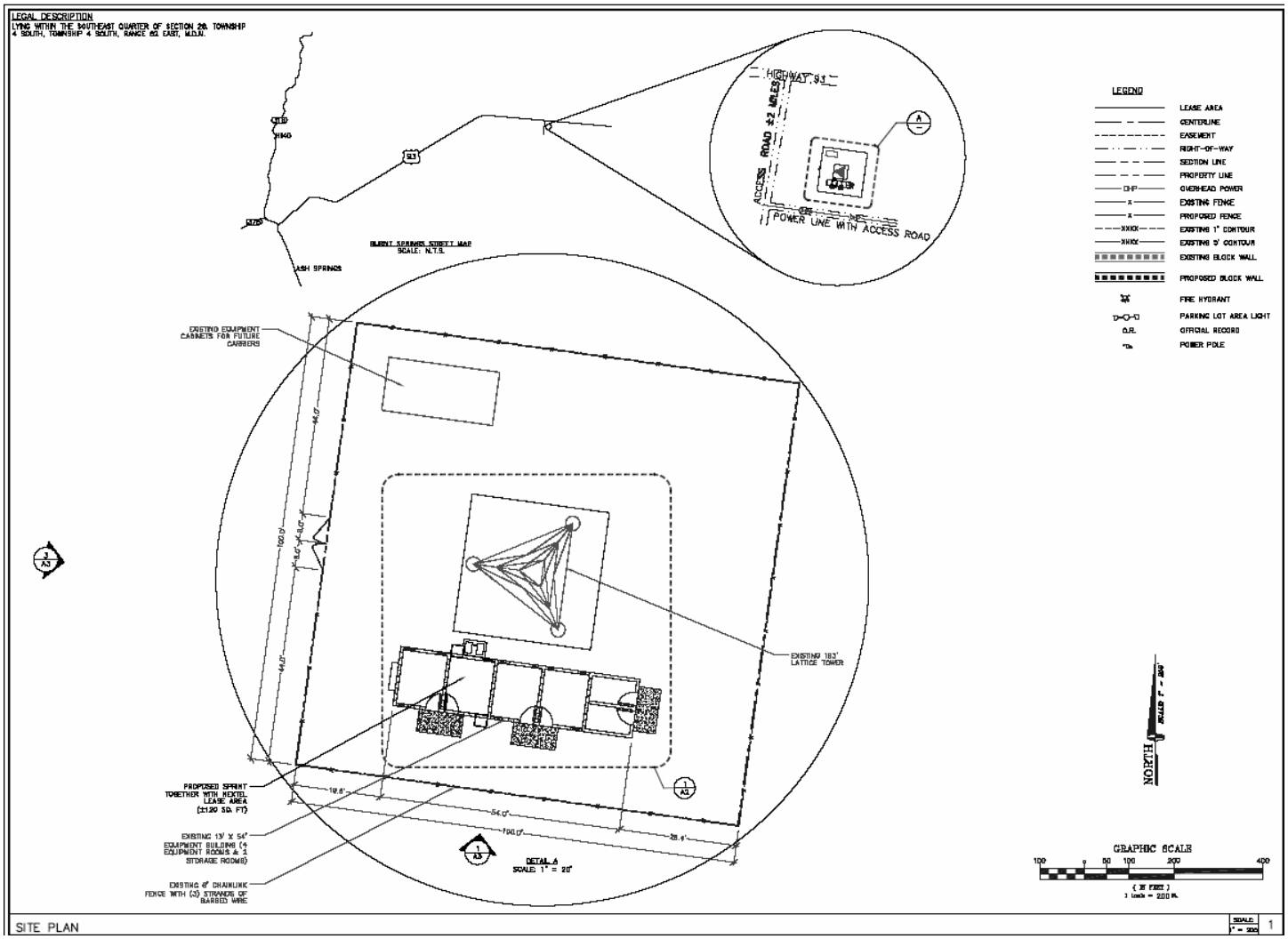

Pahroc Canyon
Pahroc Summit Pass
93
93
93
93
93
White Sage Reservoir
ANTC - Burnt Springs
Pahroc Valley
South Pahroc Range

Figure 1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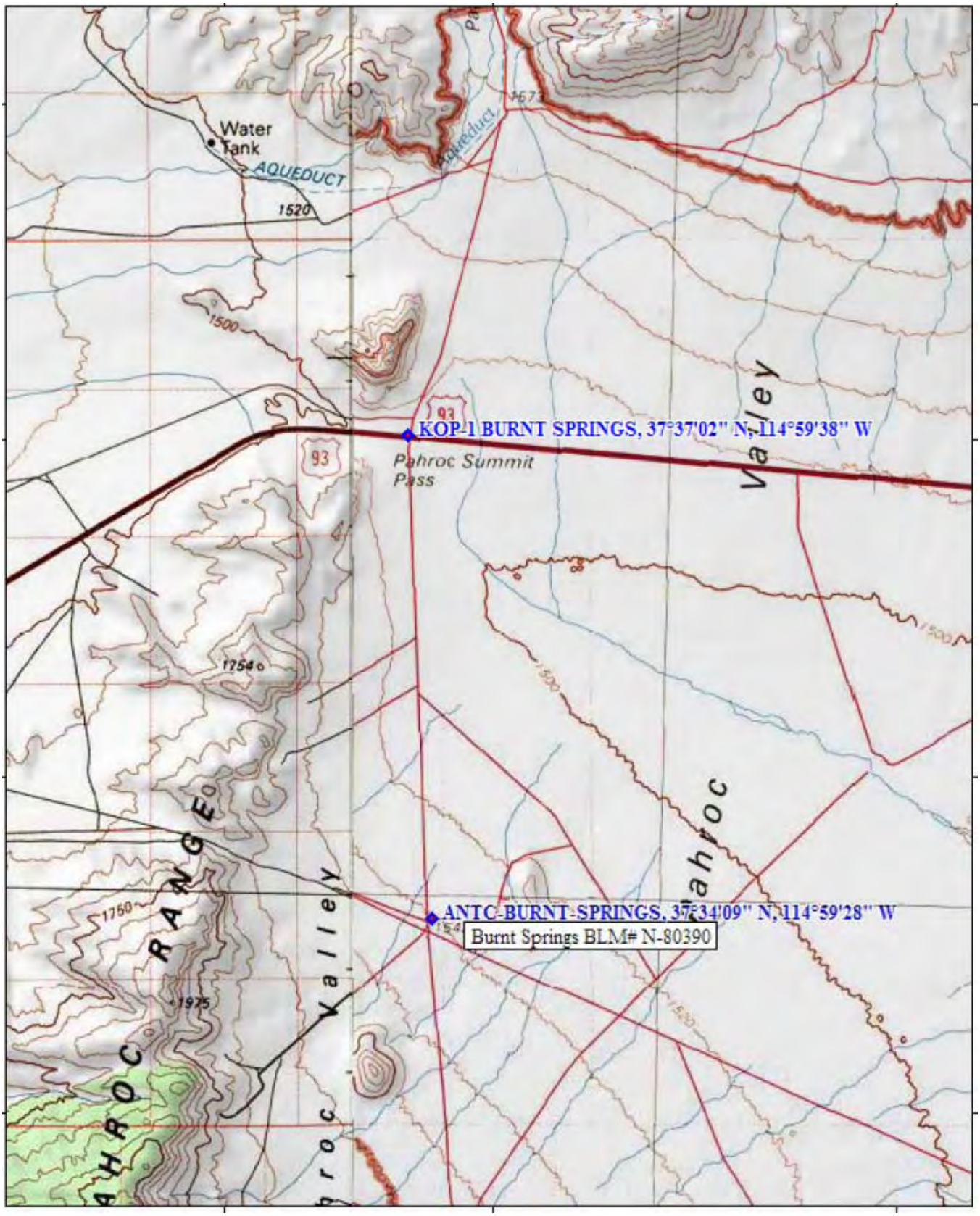
POWER LINE WITH ACCESS ROAD
BURNT SPRINGS STREET MAP
SCALE: N.T.S.
ASH SPRINGS
LEGEND
LEASE AREA
CENTERLINE
EASEMENT
RIGHT-OF-WAY
SECTION LINE
PROPERTY LINE
OHP
OVERHEAD POWER
EXISTING FENCE
PROPOSED FENCE
EXISTING 1' CONTOUR
EXISTING 5' CONTOUR
EXISTING BLOCK WALL
PROPOSED BLOCK WALL
FIRE HYDRANT
PARKING LOT AREA LIGHT
O.R.
OFFICIAL RECORD
POWER POLE
EXISTING EQUIPMENT CABINETS FOR FUTURE CARRIERS
EXISTING 183' LATTICE TOWER
PROPOSED SPRINT TOGETHER WITH NEXTEL LEASE AREA (±120 SQ. FT.)
EXISTING 13' X 54' EQUIPMENT BUILDING (4 EQUIPMENT ROOMS & 1 STORAGE ROOM)
EXISTING 6' CHAINLINK FENCE WITH (3) STRANDS OF BARBED WIRE
DETAIL 6
SCALE: 1" = 20'
HURON
GRAPHIC SCALE
SITE PLAN
SCALE
1

Figure 2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93
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Pahroc Valley
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1500
ANTC-BURNT-SPRINGS, 37°34'09" N, 114°59'28" W
Burnt Springs BLM# N-80390
1750
1975
PAHROC RANGE

Figure 3

Figure 4

Key Observation Point 1. This photograph represents the current visual landscape

Figure 4a

This photograph represents the current visual landscape from 1 mile away from site

Key Observation Point 1. This photographic simulation represents what the visual landscape may look like at 1 mile

Figure 5

The follow six pictures represent what in an actual setting the tower facility would look like on flat land. The pictures are a communication facility built north of Tonopah, Nevada. As can be seen the tower fades from sight fairly quickly.

Tower in the picture above is approximately 800 feet away.

Tower in picture above is approximately 2 tenths of mile away.

Tower in picture above is approximately 4/10 of mile away

Tower in picture above is approximately ½ mile away.

Tower above is approximately 6/10 mile away.

Tower in picture above is approximately 1 mile away.

VISUAL RESOURCE CONTRAST RATING REPORT FOR THE CALIENTE COMMUNICATION SITE IN LINCOLN COUNTY NEVADA

N-80387

Submitted to
Bureau of Land Management
Ely Field Office

Prepared by:

Arizona Nevada Tower Corp.
1641 East Sunset Road Suite B-111
Las Vegas, Nevada 89119
(702) 454-2682

October 27, 2006

1) Introduction

Arizona Nevada Tower Corporation submitted a right-of-way application, serialized by the Ely Field Office of the Bureau of Land Management for a Communication Facility on Federal lands in Lincoln County, Nevada. The site is located south of US Highway 93 above the Township of Caliente. The right-of-way was precipitated by the determination that additional communication facilities are required to expand cellular phone service within the coverage area.

2) Project Description

The requested right-of-way consists of a site type for communication facilities (Caliente Communication Site) for a period consistent with those issued by the Bureau of Land Management. Currently, the proposed structure is for a cellular phone type communication facility located on a plateau south and overlooking the Township of Caliente. The proposed site is approximately .9 tenths of a mile south and 750 above the Township of Caliente, (Figure 1). The right-of-way will consist of a fenced compound of approximately 10,000 sq.ft., encompassing a single 195 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include maintenance road(s) and utility right-of-way(s), (Figure 2).

2.1 Site Characteristics: The proposed site is approximately ¼ Acre, located some .9 tenths of a mile south of US Highway 93 on a disturbed area. The vicinity north of the proposed site has an existing communication tower, power poles and land line telephone communication facilities. The areas east, west and south of the proposed site is high desert chaparral and has domestic litter and other indications of public use. The site elevation is approximately 5,170 feet and sits on a slight grade. The site is not observable from the township or highway. The proposed site is located south and east of the existing tower communication site.

2.2 Tower: The site will consist of a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), overhead and underground cable runs between tower and equipment building(s), underground lighting protection conductors connected to tower and equipment building, and 6 foot chain link fencing with barb wire strands atop enclosing site.

2.3 Building: An overall completed building dimension should approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) will be placed in phases as required by tower users. The building(s) will be situated 5 feet from and parallel to enclosure chain link fencing along the side.

2.4 Utilities: Power will be supplied from an existing overhead power line located approximately 100 feet away from the proposed site. The site power service will be supplied overhead utilizing existing or new maintenance road(s) and terminating at the site then run overhead or underground as may be determined by the supplying utility or local building code.

2.5 Maintenance Road: Currently there is existing dirt access road approximately 25 foot wide leading from the Township of Caliente and proceeding up a canyon to the plateau and ending directly into the proposed site.

2.6 Construction: Disturbance associated with grading and or grubbing will be minimal due to the relative flat nature of the site. Areas requiring improved work surfaces (tower, building(s), maintenance road, utility service and fenced compound) may be totally disturbed during construction. When possible, construction equipment and service vehicles will drive over/around vegetation and avoid damaging any perennial plants.

2.7 Reclamation Efforts: Whenever possible, plants will be salvaged, stockpiled and placed back within the right-of-way after construction activities are completed.

2.8 Operation: Once operational it is anticipated that onsite inspections of the site would occur at a minimum monthly. All maintenance or repairs would be completed as needed and would be confined mainly to the tower and or equipment building(s) within the fenced enclosure and accessed from the maintenance road.

2.9 Future Land Use(s): The proposed site is situated approximately .9 tenths of a mile south of the Township of Caliente (private property) and is situated on public lands. The lands surrounding the proposed site (east, west and south) are high desert chaparral and public lands. Therefore, it is unlikely that the surrounding lands will be developed to any extent in the future.

3) Visual Resources Management Objective (VRM)

As identified in the Department of Interior, Bureau of Land Management Visual Resource Contrast Rating manual 8431, Appendix 2 – VRM Class Objectives, Class II Objectives states "The objective of this class is to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape".

4) Key Observation Points (KOP)

Based on ground reconnaissance the closest observation points were along US Highway 93 (Figure 3). Two KOP's were established, one mile east and west, and each selected to avoid locations that were on the periphery or outside the straight ahead view of drivers and passengers of vehicles.

> **KOP 1: This location is approximately 4,377 feet in elevation and one mile +/- southwest of proposed site (Figure 4).**

KOP 2: This location is approximately 4,417 feet in elevation and one mile +/- northeast of proposed site (Figure 5).

Both observation points offer a relatively unobstructed view of the proposed tower.

5) Visual Simulation

The following pictures (Figures 6 and 7) provide a visual representation of the current conditions at the proposed site and visual simulation of the proposed site.

6) Contrast Rating

Information for the contrast rating was compiled from utilization of Visual Contrast Rating Worksheet Form 8400-4 and prepared for each KOP.

Currently, the linear and banding nature of the highway corridor and the urban development in the Township of Caliente offer a dominate presence from both east and west bound views along US Highway 93 and the Township of Caliente. The urban development, billboards signage, business signs, black roadway, yellow and white striping, cleared highway shoulder, highway signs and other disturbed areas along the highway periphery, provide contrast to the natural characteristics in the area. In addition, within 300 feet of the proposed project there exists a communication site which includes a monopole tower, equipment shelter and overhead electric power supply line and is situated within viewing range from the City of Caliente.

Visual impacts associated with the proposed project are anticipated to be long term in nature due to the fact that the site is in a remote area and little to no private lands are available for development and its unknown if the surrounding public lands will be placed on a land disposal program with-in the life cycle of the project. It is anticipated that the proposed project and the existing tower will be the only development within the area for an extended period of time.

The following section presents the analysis, for each KOP and the potential impacts the proposed project may have on the Visual Resource Features (landscape, vegetation and structures) in three categories (foreground, mid-ground and background) which correspond to their proximity to the KOP and the horizon. Foreground was defined as extending from the KOP to approximately half way to the project site, the background as the mountains and sky and the mid-ground as the area in between.

6.1) KOP 1 / KOP2

Due to the similarity of two viewing points and short distances between them (approximately 2 miles) the analyses were combined for KOP1 and KOP2. Where differences are determined they are noted as to the viewing point.

6.1.1 Landscape:

Foreground: The proposed project is not a component of the foreground and is not expected to have any impact. The line contrast element was identified due to the superior position of the proposed project. The line contrast was rated as weak due to the inferior position of the casual viewer. The banding affect created by US Highway 93 is obvious and provides a bold contrast to the surrounding undisturbed areas in addition the ever present urban development of Caliente is obvious and a strong draw to the casual viewer.

Mid-Ground: The proposed project (Tower) is a component of the mid-ground and expected to have some impact on the landscape. The vertical landscape from the highway to the project site will have an unobstructed view of the tower component of the proposed site. Therefore, the tower component of the site should be viewable and is expected to have a moderate impact on the texture elements. Color element impacts are expected to be weak, since the silver/grey color of the tower will blend with the tan to gray hues present in the mid-ground. The tall threadlike nature of the tower is expected to provide a moderate contrast to the topographic relief in the mid-ground. Due to the existing banding effect created by the road-way, transmission lines, urban development, billboards, business signage, as well as, the distance from the KOP's, it is unlikely that the casual viewer will be immediately attracted to the tower, but the tower will be visible from the KOP's. A temporary contrast rating of moderate was determined to be appropriate for the form element.

Background: The proposed tower is not a component of the back-ground but the line, form and color elements extend into the landscape. The vertical angular nature of the tower will be silhouetted against the ground sky interface in the background at both KOPs. The silver/gray color of the tower will contrast against the sky blue in the background. These visual components provide an obvious contrast. However, due to the threadlike nature of the tower and the lack of background the contrast rating was determined to be weak for line, form and color elements.

6.1.2 Vegetation

Foreground: The proposed tower is not a component of the foreground and therefore is not expected to have any impact. The tan to pastel green colors and short vegetation do not contribute to any of the contrast elements.

Mid-Ground: The vertical nature of the landscape and tan to pastel green colors, and compact vegetation do not contribute to any of the contrast elements. The visible portion of the tower does not disrupt the vegetation component of the visual landscape.

Background: No vegetation is visible.

6.1.3 Structures

Foreground: The proposed tower is not a component of the foreground and is not expected to have an impact.

Mid-Ground: As the tower is an engineered component and unlike any natural feature, some degree of contrast is expected. It is anticipated due to the superior nature of the proposed site, that the tower components will be visible from US Highway 93 and the Township of Caliente but peripheral to the focal affect of the highway. Therefore, a temporary contrast rating of weak was determined to be appropriate for all elements. In addition a monopole tower, equipment shelter and overhead electric lines exists within 300 feet of the proposed project.

Background: The proposed tower is not a component of the background but the tower silhouette is expected to have some impact on the form, line and color elements. Due to the distances to the background and proportionate size of the tower, the form, line and color element were determined to be weak in nature. There are no other structures present.

7.1) Mitigation Measures

The following measures should be implemented to reduce any potential impacts:

1. **Tower should be grey/silver in color to blend with surrounding landscape.**
2. **Minimize new surface disturbances to avoid large open areas which contrast to the undisturbed areas.**
3. **Equipment buildings should be tan to medium brown in color to blend with mid-ground and background colors.**

8.1) Findings/Conclusions

These findings are based on site reconnaissance, visual simulation, visual comparison of existing sites with similar characteristics, visual contrast analysis and would meet the management objectives for a Class II VRM area.

The proposed communication facility consists of a 100' x 100' fenced compound containing a tower, equipment building and utility pedestal. The site is accessed by exiting US Highway 93 to a dirt road and sits in a superior position to the viewer.

The analysis of the findings did not identify any of the contrast elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the urban development (housing, business, billboards, business signage the ever-present

transmission line and the strong contrast associated with the vertical rise in the background of both KOP's, will attract more attention from the viewer than the proposed communication facility. The limited impacts will be long term in duration but could be lessened by the development of the land adjacent to the project should the private or public lands be made available for development.

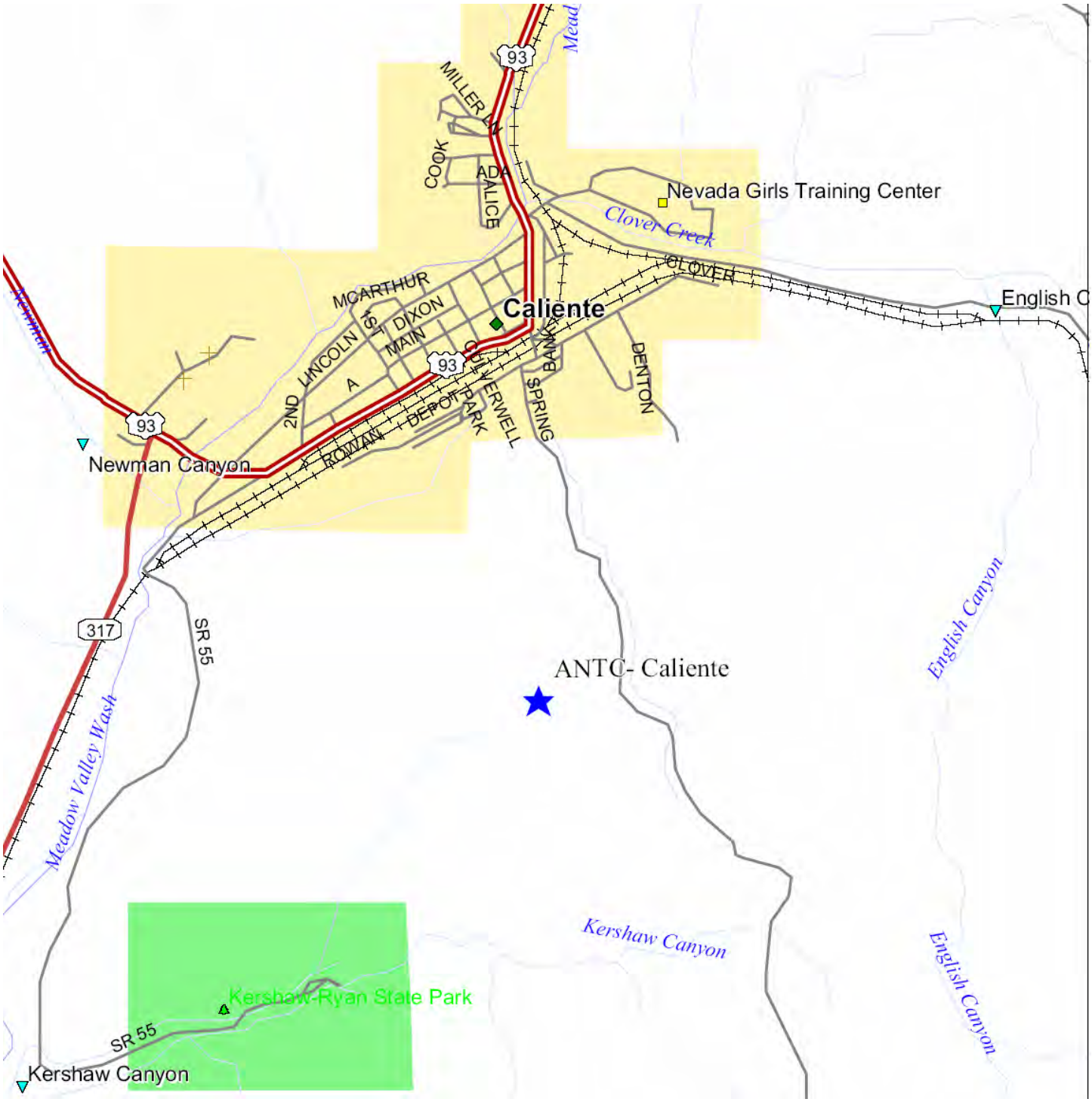

93
MILLER LN
COOK
ADA
ALICE
Nevada Girls Training Center
Clover Creek
CLOVER
English C
MCARTHUR
1ST
DIXON
MAIN
Caliente
93
2ND
LINCOLN
A
DEPOT
PARK
ROWAN
CLIVERWELL
SPRING
BANK
DENTON
93
Newman Canyon
317
SR 55
ANTC- Caliente
English Canyon
Meadow Valley Wash
Kershaw Canyon
English Canyon
Kershaw-Ryan State Park
SR 55
Kershaw Canyon

Figure 1

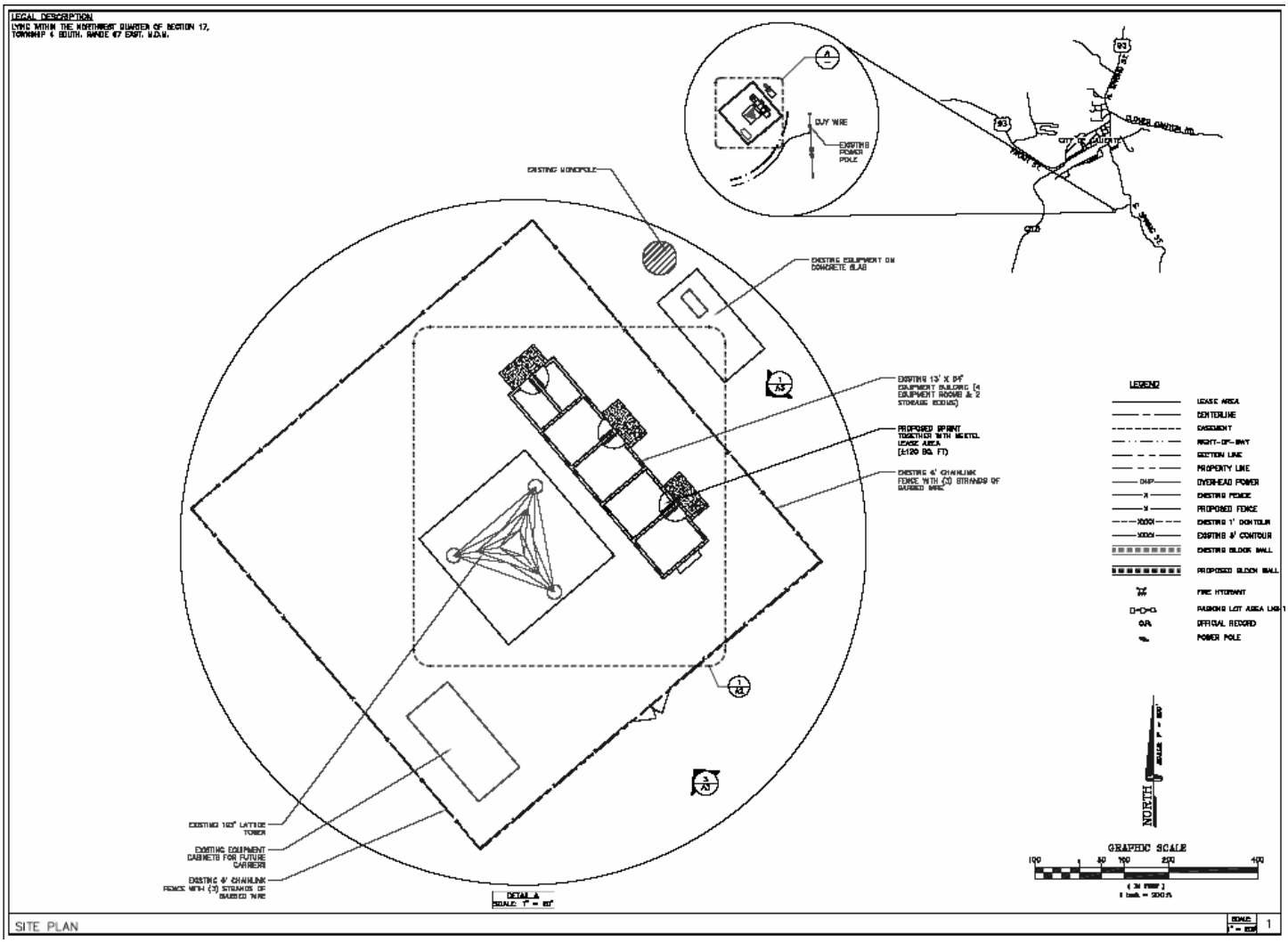
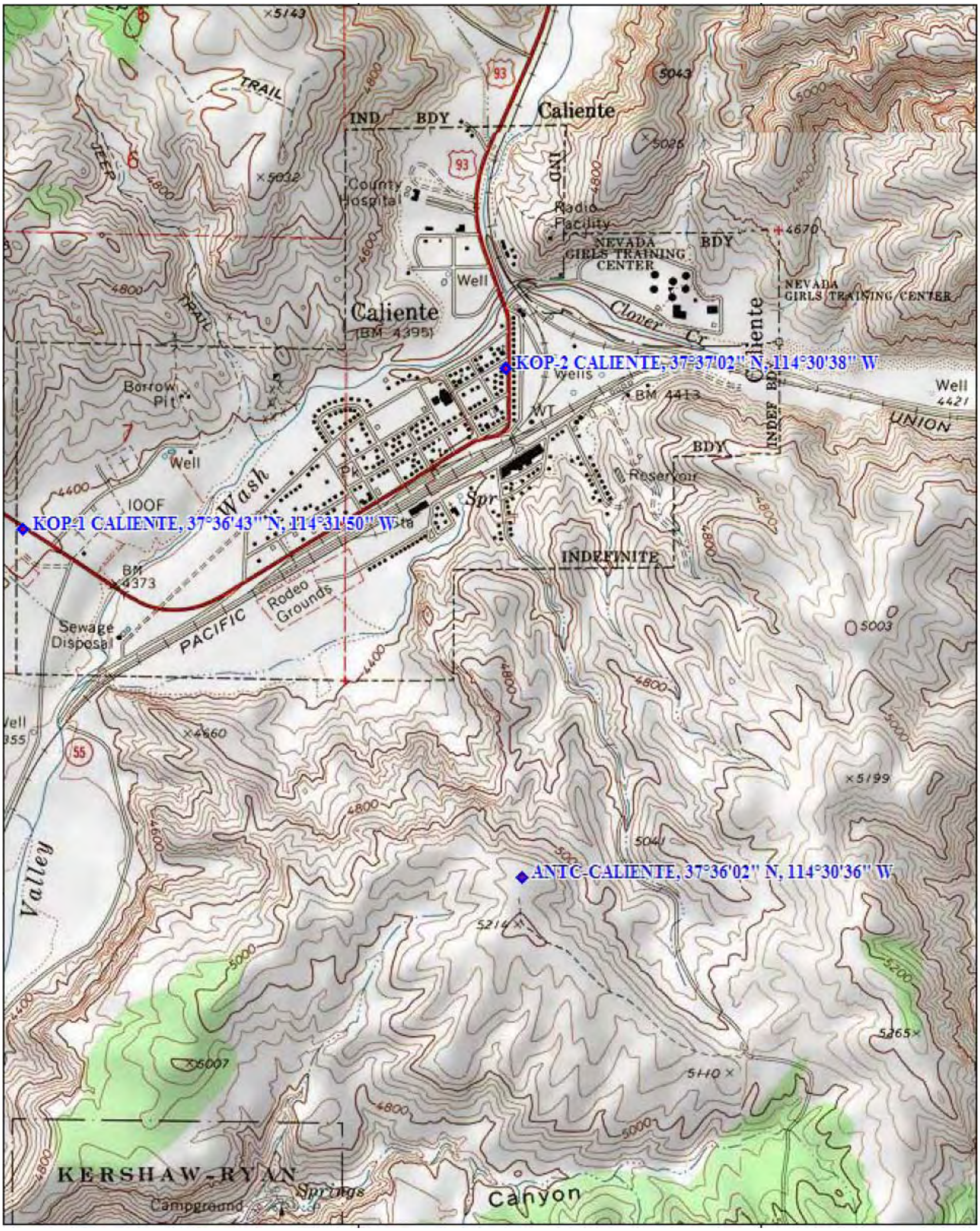

LEGAL DESCRIPTION
LYING WITHIN THE NORTHWEST QUARTER OF SECTION 12, TOWNSHIP 4 SOUTH, RANGE 67 EAST, W.D.M.
EXISTING MONOPOLE
EXISTING EQUIPMENT ON CONCRETE SLAB
EXISTING 13' X 24' EQUIPMENT BUILDING (4 EQUIPMENT ROOMS & 2 STORAGE ROOMS)
PROPOSED UPRINT TOGETHER WITH METES LEASE AREA (±120 SQ. FT)
EXISTING 6' CHAINLINK FENCE WITH (3) STRANDS OF BARBED WIRE
EXISTING 120' LATTICE TOWER
EXISTING EQUIPMENT CABINETS FOR FUTURE CARRIERS
EXISTING 6' CHAINLINK FENCE WITH (3) STRANDS OF BARBED WIRE
DETAIL A
SCALE: 1" = 60'
GUY WIRE
EXISTING POWER POLE
CLOVER CANYON RD
LEGEND
LEASE AREA
CENTERLINE
EASEMENT
RIGHT-OF-WAY
SECTION LINE
PROPERTY LINE
OVERHEAD POWER
EXISTING FENCE
PROPOSED FENCE
EXISTING 1' CONTOUR
EXISTING 5' CONTOUR
EXISTING BLOCK WALL
PROPOSED BLOCK WALL
FIRE HYDRANT
PARKING LOT AREA LIGHT
OFFICIAL RECORD
POWER POLE
NORTH
GRAPHIC SCALE
100 1 50 100 200 400
SITE PLAN
SCALE: 1" = 60'
1

Figure 2



KOP-2 CALIENTE, 37°37'02" N, 114°30'38" W
KOP-1 CALIENTE, 37°36'43" N, 114°31'50" W
ANTC-CALIENTE, 37°36'02" N, 114°30'36" W
Caliente
NEVADA GIRLS TRAINING CENTER
County Hospital
Radio Facility
Borrow Pit
Sewage Disposal
Rodeo Grounds
PACIFIC
UNION
Wash
Reservoir
INDEFINITE
Valley
KERSHAW-RYAN
Campground
Canyon

Figure 3

Key Observation Point 1. This photograph represents the current visual landscape

Figure 4

Key Observation Point 2. This photograph represents the current visual landscape

Figure 5

Key Observation Point 1. This photographic simulation represents what the visual landscape may look like following the completion of the project

Figure 6

The follow six pictures represent what in an actual setting the tower facility would look like on flat land. The pictures are a communication facility built north of Tonopah, Nevada. As can be seen the tower fades from sight fairly quickly.

Tower in the picture above is approximately 800 feet away.

Tower in picture above is approximately 2 tenths of mile away.

Tower in picture above is approximately 4/10 of mile away

Tower in picture above is approximately ½ mile away.

Tower above is approximately 6/10 mile away.

Tower in picture above is approximately 1 mile away.

VISUAL RESOURCE CONTRAST RATING REPORT FOR THE COYOTE SPRINGS COMMUNICATION SITE IN LINCOLN COUNTY NEVADA

N-80510

Submitted to
Bureau of Land Management
Ely, Nevada Field Office

Prepared by:

Arizona Nevada Tower Corp.
1641 East Sunset Road Suite B-111
Las Vegas, Nevada 89119
(702) 454-2682

September 7, 2006

1) Introduction

Arizona Nevada Tower Corporation submitted a right-of-way application, serialized by the Ely Field Office of the Bureau of Land Management for a Communication Facility on Federal lands in Lincoln County, Nevada in approximation to U.S. Highway 93 and State Road 168. The right-of-way was precipitated by the determination that additional communication facilities are required to expand cellular phone service along U.S. Highway 93 north of the Las Vegas metropolitan area.

2) Project Description

The requested right-of-way consists of a site type for communication facilities (Coyote Springs Communication Site) for a period consistent with those issued by the Bureau of Land Management. Currently, the proposed structure is for a cellular phone type communication facility located on the west side of US Highway 93 approximately 30 miles north of the Interstate 15 and US Highway 93 interchange (Figure 1). The right-of-way will consist of a fenced compound of approximately 10,000 sq.ft., encompassing a single 195 foot self-supporting lattice tower, equipment building(s) and utility service panels. The right-of-way will also include a maintenance road and a utility right-of-way, (Figure 2).

2.1 Site Characteristics: The proposed site is approximately ¼ Acre, located some 400 feet west of US Highway 93 in an area previously graded and disturbed. The vicinity around the proposed site remains undisturbed other than the existing wood pole tower (Lincoln County Telephone {operational}), double wooden power poles associated with an overhead transmission line running parallel to US Highway 93 (operational) and an existing dirt access road. The site elevation is approximately 2545 feet and is situated on a level area with a limestone mix surface with occasional small boulders and caliche.

2.2 Tower: The site will consist of a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), overhead and underground cable runs between tower and equipment building(s), underground lighting protection conductors connected to tower and equipment building, and 6 foot chain link fencing with barb wire strands atop enclosing site.

2.3 Building: An overall completed building dimension should approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) will be placed in phases as required by tower users. The building(s) will be situated 5 feet from and parallel to enclosure chain link fencing along the side.

2.4 Utilities: Power will be supplied from an existing overhead power line located east of the proposed site and paralleling US Highway 93. The site power service will be supplied underground from the existing overhead line utilizing existing or new maintenance road(s) or overhead as may be determined by the supplying utility or local building code.

2.5 Maintenance Road: Currently there is existing dirt access road approximately 25 foot wide leading from the highway and ending at the south eastern corner of the proposed site.

2.6 Construction: Disturbance associated with grading and or grubbing will be minimal due to the disturbed nature of the tower site enclosure, (site was previously leveled). Areas requiring improved work surfaces (tower, building(s), maintenance road, utility service and fenced compound) may be totally disturbed during construction. When possible, construction equipment and service vehicles will drive over/around vegetation and avoid damaging any perennial plants.

2.7 Reclamation Efforts: Whenever possible, plants will be salvaged, stockpiled and placed back within the right-of-way after construction activities are completed.

2.8 Operation: Once operational it is anticipated that onsite inspections of the site would occur at least once every 3 months. All maintenance or repairs would be completed as needed and would be confined mainly to the tower and or equipment building(s) within the fenced enclosure and accessed from the maintenance road.

2.9 Future Land Use(s): The proposed site is situated approximately 25 miles north of a private industrial development project (APEX) and 6 miles north of a private residential project at Coyote Springs. Therefore, it is likely that the lands south of the site will be developed to some extent in the future.

3) Visual Resources Management Objective (VRM)

As identified in the Department of Interior, Bureau of Land Management Visual Resource Contrast Rating manual 8431, Appendix 2 – VRM Class Objectives, Class III Objectives states "The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basis elements found in the predominant natural features of the characteristic landscape."

4) Key Observation Points (KOP)

Based on ground reconnaissance the closest observation points were along US Highway 93 (Figure 3). Two KOP's were established, one mile north and south, and each selected to avoid locations that were on the periphery or outside the straight ahead view of drivers and passengers of vehicles.

> **KOP 1: This location is approximately 2500 feet in elevation and one mile north of proposed site (Figure 4).**

KOP 2: This location is approximately 2,500 feet in elevation and one mile south of proposed site (Figure 5).

Both observation points offer a relatively unobstructed view of the proposed tower and equipment shelter.

5) Visual Simulation

The following pictures (Figures 6 and 7) provide a visual representation of the current conditions at the proposed site and pictures of an existing completed tower located along US Highway 95 approximately 25 miles north of Beatty, Nevada with similar characteristics in color, texture, background height and native rock. The completed tower pictures offer an actual representation of the potential impact on the proposed site and are substituted for simulation or interpretation.

6) Contrast Rating

Information for the contrast rating was compiled from utilization of Visual Contrast Rating Worksheet Form 8400-4 and prepared for each KOP (Attachment A).

Currently, the linear and banding nature of the highway corridor is a dominate presence from both north and south bound views along US Highway 93. The black roadway, yellow and white striping, cleared highway shoulder, highway signs and other disturbed areas along the highway periphery, provide contrast to the natural characteristics in the area. The closest development that encroaches on and obscures the natural landscape is approximately 6 miles south of site and abuts U.S. Highway 93 on the east (Coyote Springs Subdivision and Golf Course U.S. Highway 93 and State Road 168). Between the proposed project area and the Interstate 15 interchange, the visual contrasts are natural excepting the presence of a power line running parallel too and crossing the highway. There are numerous dirt trails leading away from the highway creating a banding effect and harsh lines with moderate color changes.

Visual impacts associated with the proposed project are anticipated to be long term in nature due to the fact that the site is in a remote area and little to no private lands are available for development and its unknown if the surrounding public lands will be placed on a land disposal program with-in the life cycle of the project. It is anticipated that the project will be the only development within the area for an extended period of time other than the above mentioned subdivision.

The following section presents the analysis, for each KOP and the potential impacts the proposed project may have on the Visual Resource Features (landscape, vegetation and structures) in three categories (foreground, mid-ground and background) which correspond to their proximity to the KOP and the

horizon. Foreground was defined as extending from the KOP to approximately half way to the project site, the background as the mountains and sky and the mid-ground as the area in between.

6.1) KOP 1 / KOP2

Due to the similarity of two viewing points and short distances between them (approximately 2 miles) the analyses were combined for KOP1 and KOP2. Where differences are determined they are noted as to the viewing point.

6.1.1 Landscape:

Foreground: The proposed project is not a component of the foreground and is not expected to have any impact. The line contrast element was identified due to the open expanse and gentle slope of the land. The banding affect created by US Highway 93 is obvious and provides a bold contrast to the surrounding undisturbed areas.

Mid-Ground: The proposed project (Tower, Shelter, and Fencing) is a component of the mid-ground and expected to have some impact on the landscape. The level landscape from the highway to the project site will create an unobstructed view of the proposed project. The transmission line running parallel to U.S. Highway 93 and situated between the proposed project and U.S. Highway 93 will create differentiating textures ranging from a horizontal to vertical element. The textures should blend together as both the proposed project and the existing transmission line are of man made substances. Color element impacts are expected to be weak, since the silver/grey color of the tower will blend with the tan to gray hues present in the mid-ground. The tall threadlike nature of the tower is expected to provide a contrast to the lack of topographic relief and gentle slopes which are present in the mid-ground. Due to the existing banding effect created by the road-way, transmission line, fencing and dirt roads, as well as, the distance from the KOP's, it is unlikely that the casual viewer will be immediately attracted to the tower, but the tower will be visible from the KOP's. A temporary contrast rating of weak was determined to be appropriate for the form element.

Background: The proposed tower is not a component of the back-ground but the line, form and color elements extend into the landscape. The vertical angular nature of the tower will be silhouetted against the mountains in the background at KOP1, and should extend into the mountain and sky interface, the silhouetting effect will also be present at KOP2. The extended distance between the proposed project and the background (KOP1 and 2) may appear to extend into the background and the mountain sky interface. The silver/gray color of the tower will contrast against the tan/dark gray/lava-black colors present in the background. These visual components provide an obvious contrast. However, due to the threadlike nature of the tower and the background not being obscured, the contrast rating was determined to be moderate for line, form and color elements.

6.1.2 Vegetation

Foreground: The proposed tower is not a component of the foreground and therefore is not expected to have any impact. The tan to pastel green colors and short vegetation do not contribute to any of the contrast elements.

Mid-Ground: The disbursed, tan to pastel green colors, and compact vegetation do not contribute to any of the contrast elements. The visible portion of the tower does not disrupt the vegetation component of the visual landscape.

Background: No vegetation is visible.

6.1.3 Structures

Foreground: The proposed tower is not a component of the foreground and is not expected to have an impact. The transmission line and highway are present in the foreground, no other structures are present.

Mid-Ground: As the tower is an engineered component and unlike any natural feature, some degree of contrast is expected. It is anticipated due to the level position of the site, that the proposed project including tower, fencing and equipment building(s) on the site will be visible from US Highway 93, but peripheral to the focal affect of the highway. Therefore, a temporary contrast rating of moderate was determined to be appropriate for form and line and weak for color and texture.

Background: The proposed tower is not a component of the background but the tower silhouette is expected to have some impact on the form, line and color elements. Due to the distances to the background and proportionate size of the tower, the form, line and color element were determined to be weak in nature. There are no other structures present.

7.1) Mitigation Measures

The following measures should be implemented to reduce any potential impacts:

1. **Tower should be grey/silver in color to blend with surrounding landscape.**
2. **Minimize new surface disturbances to avoid large open areas which contrast to the undisturbed areas.**
3. **Equipment buildings should be tan to medium brown in color to blend with mid-ground and background colors.**

8.1) Findings/Conclusions

These findings are based on site reconnaissance, visual simulation, visual comparison of existing sites with similar characteristics, visual contrast analysis and would meet the management objectives for a Class III VRM area.

The proposed communication facility consists of a 100’ x 100’ fenced compound containing a tower, equipment building and utility pedestal. The site is accessed by exiting US Highway 93 to a dirt road and sits at level position to the viewer. The facility sits on a gentle slope adjacent to U.S. Highway 93.

The analysis of the findings did not identify any of the contrast elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of US Highway 93 in the foreground and mid-ground, the ever-present transmission line and the strong contrast associated with the mountains in the background of both KOP’s, will attract more attention from the viewer than the proposed communication facility. The limited impacts will be long term in duration but could be lessened by the development of the land adjacent to the project should the public lands be made available for disposal.

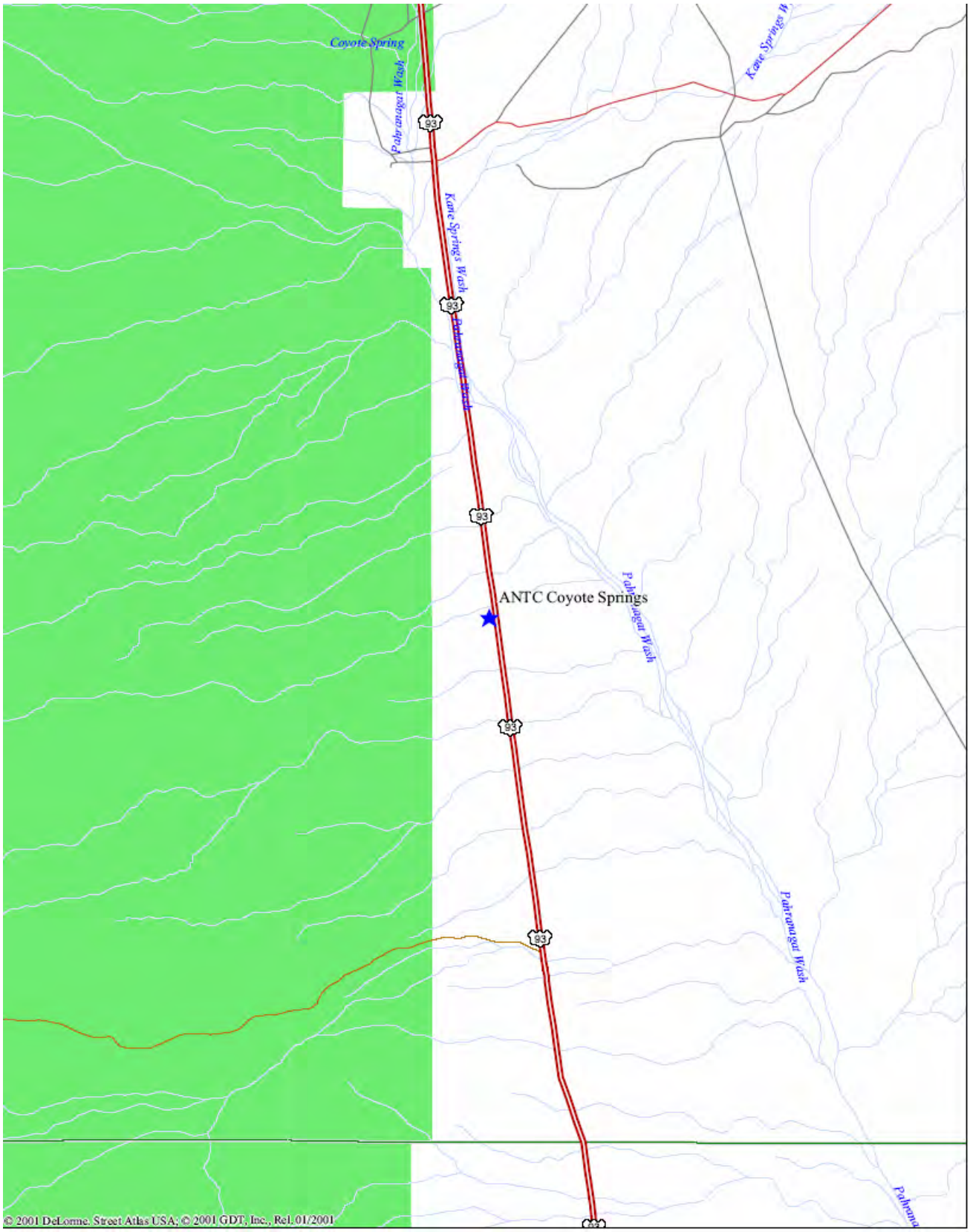
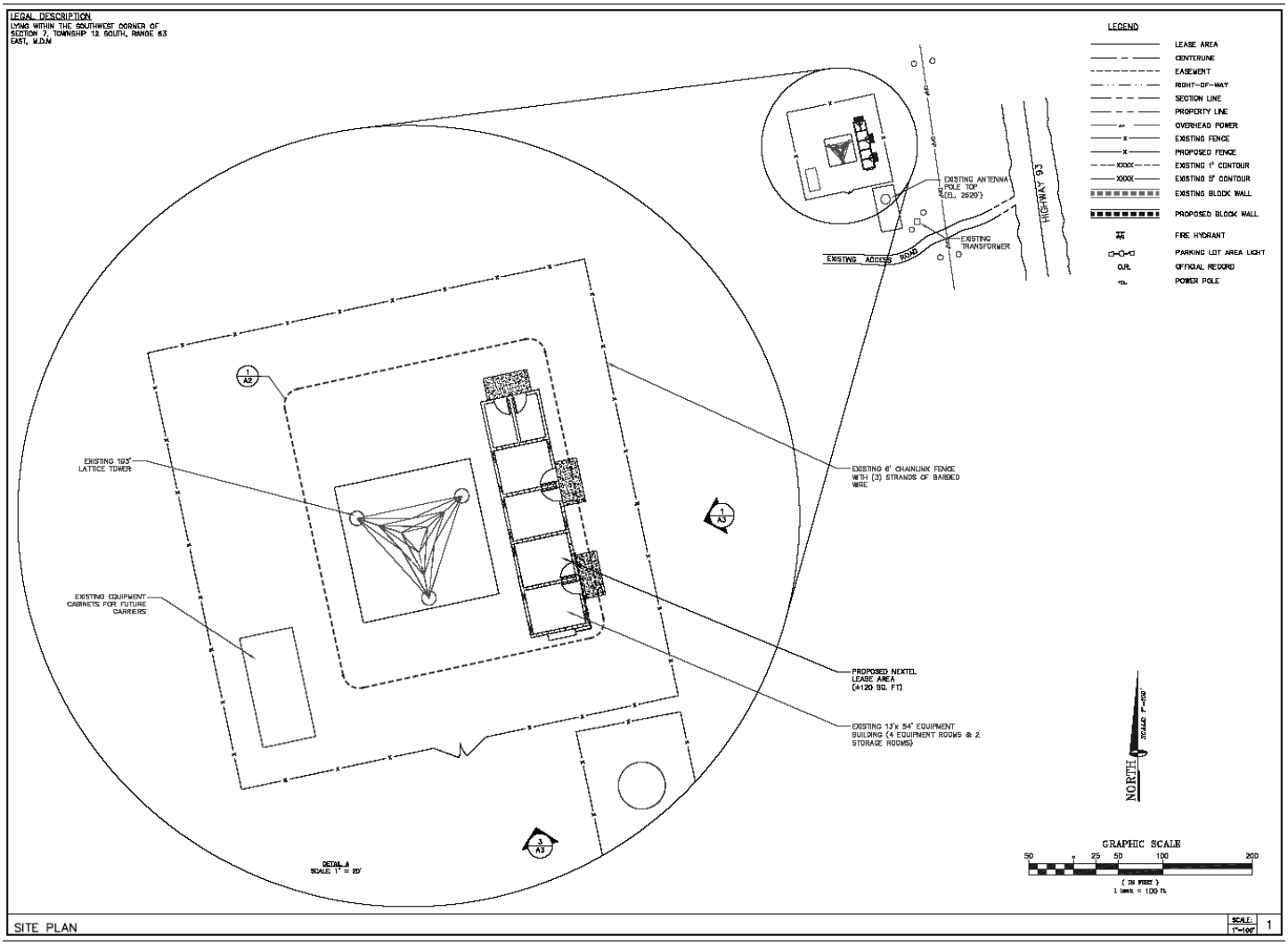

Coyote Spring
Kane Springs Wash
93
Kane Springs Wash
Pahranagat Wash
ANTC Coyote Springs
Pahranagat Wash
Pahranagat Wash
© 2001 DeLorme. Street Atlas USA; © 2001 GDT, Inc., Rel. 01/2001

Figure 1


LEGAL DESCRIPTION
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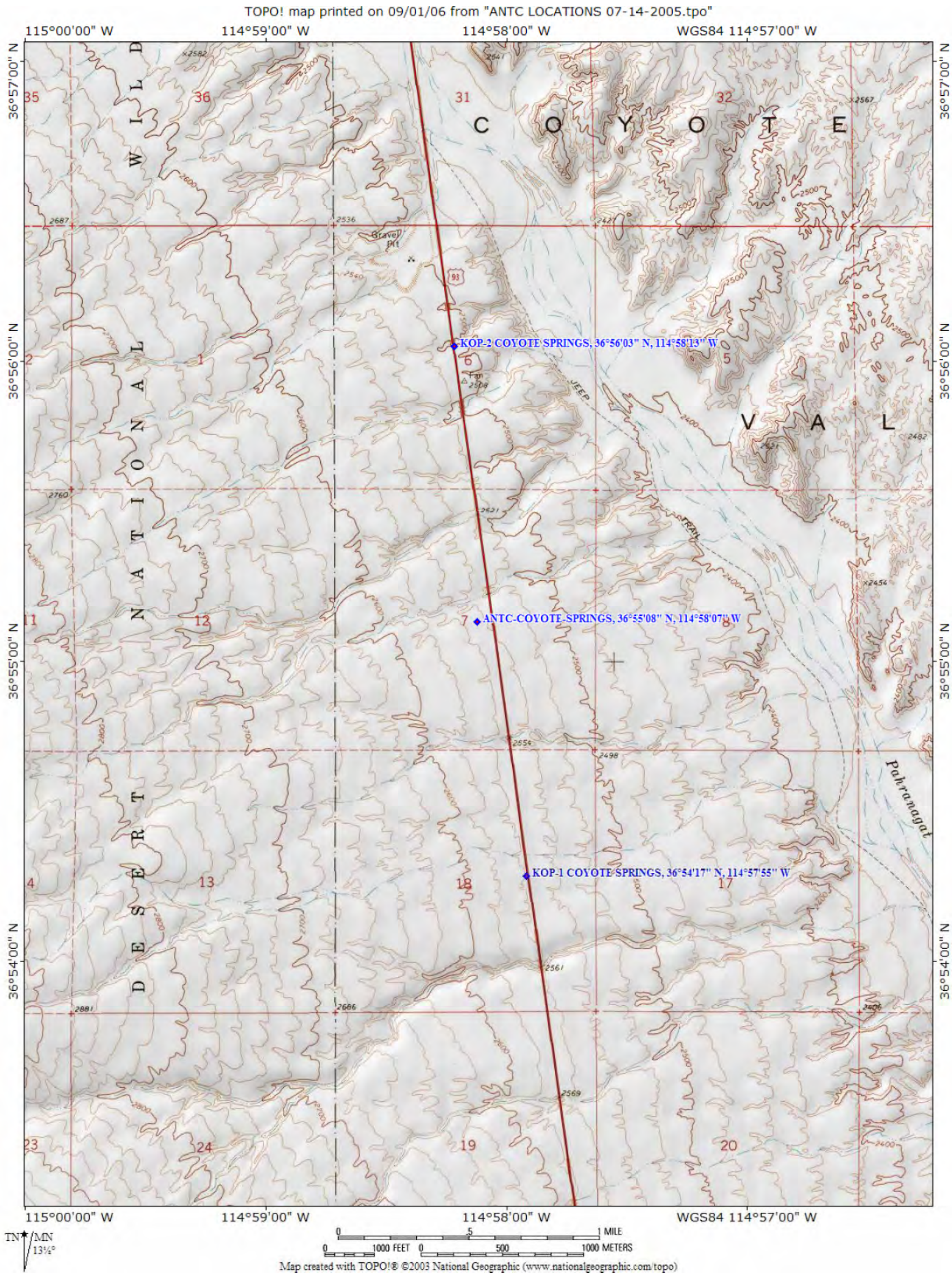
LEGEND
LEASE AREA
CENTERLINE
EASEMENT
RIGHT-OF-WAY
SECTION LINE
PROPERTY LINE
OVERHEAD POWER
EXISTING FENCE
PROPOSED FENCE
EXISTING 1' CONTOUR
EXISTING 5' CONTOUR
EXISTING BLOCK WALL
PROPOSED BLOCK WALL
FIRE HYDRANT
PARKING LOT AREA LIGHT
O.R. OFFICIAL RECORD
POWER POLE
EXISTING ANTENNA POLE TOP (EL. 2520')
EXISTING TRANSFORMER
EXISTING ACCESS ROAD
HIGHWAY 93
EXISTING 193' LATTICE TOWER
EXISTING 6' CHAINLINK FENCE WITH (3) STRANDS OF BARBED WIRE
EXISTING EQUIPMENT CABINETS FOR FUTURE CARRIERS
PROPOSED NEXTEL LEASE AREA (±120 SQ. FT)
EXISTING 13'x 54' EQUIPMENT BUILDING (4 EQUIPMENT ROOMS & 2 STORAGE ROOMS)
NORTH
GRAPHIC SCALE
SITE PLAN

Figure 2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36°57'00" N
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36°55'00" N
36°54'00" N
COYOTE VAL
DESERT NATIONAL WILD
KOP-2 COYOTE SPRINGS, 36°56'03" N, 114°58'13" W
ANTC-COYOTE-SPRINGS, 36°55'08" N, 114°58'07" W
KOP-1 COYOTE SPRINGS, 36°54'17" N, 114°57'55" W
Gravel Pit
JEEP
TRAIL
Pahranagat
TN
MN
13½°
1 MILE
1000 FEET
1000 METERS
Map created with TOPO!® ©2003 National Geographic (www.nationalgeographic.com/topo)

Figure 3

Key Observation Point 1. This photograph represents the current visual landscape

Figure 4

Key Observation Point 2. This photograph represents the current visual landscape

Figure 5

This photograph represents the current visual landscape

Figure 5a

Figure 6

Key Observation Point 1. This photographic simulation represents what the visual landscape may look like following the completion of the project the red brick building is not part of site.

This Vantage Point for South Bound Traffic. This photograph was taken from US Highway 95 of a site that ANTC owns and operates on B.L.M. Land. This photo was taken approximately ¼ mile north of site.

Figure 7

Key Observation Point 2. This photographic simulation represents what the visual landscape may look like following the completion of the project.

This Vantage Point for North Bound Traffic. This photograph was taken from US Highway 95, of a site that ANTC owns and operates on B.L.M. Land. This photograph shows the impact of the tower on the site. This picture is approximately ¼ of mile south of the site.

This photograph represents how the communication site appeared prior to installation of the tower, fence and utility pedestal.

Figure 7 a

The follow six pictures represent what in an actual setting the tower facility would look like on flat land. The pictures are a communication facility built north of Tonopah, Nevada. As can be seen the tower fades from sight fairly quickly.

Tower in the picture above is approximately 800 feet away.

Tower in picture above is approximately 2 tenths of mile away.

Tower in picture above is approximately 4/10 of mile away

Tower in picture above is approximately ½ mile away.

Tower above is approximately 6/10 mile away.

Tower in picture above is approximately 1 mile away.

VISUAL RESOURCE CONTRAST RATING REPORT FOR THE HIKO INTERSECTION COMMUNICATION SITE IN LINCOLN COUNTY NEVADA

N-

Submitted to
Bureau of Land Management
Ely, Nevada Field Office

Prepared by:

Arizona Nevada Tower Corp.
1641 East Sunset Road Suite B-111
Las Vegas, Nevada 89119
(702) 454-2682

September 19, 2006

1) Introduction

Arizona Nevada Tower Corporation submitted a right-of-way application, serialized by the Ely Field Office of the Bureau of Land Management for a Communication Facility on Federal lands in Lincoln County, Nevada near the US Highway 93, State Roads 375 and 318 intersections. The right-of-way was precipitated by the determination that additional communication facilities are required to expand cellular phone service within the coverage area.

2) Project Description

The requested right-of-way consists of a site type for communication facilities (Hiko Intersection Communication Site) for a period consistent with those issued by the Bureau of Land Management. Currently, the proposed structure is for a cellular phone type communication facility located on the north side of State Highway 375 approximately 2.5 miles west of US Highway 93 and State Highway 375 and 318 intersections. The proposed site is approximately 15 miles north of the Township of Alamo, (Figure 1). The right-of-way will consist of a fenced compound of approximately 10,000 sq.ft., encompassing a single 195 foot self-supporting lattice tower, equipment building and utility service panels. The right-of-way will also include maintenance road(s) and utility right-of-way(s), (Figure 2).

2.1 Site Characteristics: The proposed site is approximately ¼ Acre, located some .17 of a mile north of State Highway 375 in an undisturbed area. The vicinity south of the proposed site has a stock corral equipped with a loading chute and barbed wire fencing and remains disturbed from livestock movement and dirt access road to service the livestock and access to grazing. Wooden power poles associated with an overhead transmission line running parallel to State Highway 375 (operational) and north of the proposed site, dirt access road(s) accessed from State Highway 375 running parallel and away from State Highway 375 remain. The site elevation is approximately 4055 feet and sits on a flat area. The corral is observable from the highway. The proposed site is located north and west of the corral.

2.2 Tower: The site will consist of a single 195 foot Self Supporting lattice tower anchored to concrete footing(s), overhead and underground cable runs between tower and equipment building(s), underground lighting protection conductors connected to tower and equipment building, and 6 foot chain link fencing with barb wire strands atop enclosing site.

2.3 Building: An overall completed building dimension should approximate 12 feet by 60 feet by 10 feet at full tower occupancy. The building(s) will be placed in phases as required by tower users. The building(s) will be situated 5 feet from and parallel to enclosure chain link fencing along the side.

2.4 Utilities: Power will be supplied from an existing overhead power line located approximately .25 miles north of the proposed site and paralleling State Highway 375. The site power service will be supplied overhead utilizing existing or new

maintenance road(s) and terminating at the site then run overhead or underground as may be determined by the supplying utility or local building code.

2.5 Maintenance Road: Currently there is existing dirt access road approximately 25 foot wide leading from the highway and proceeding past the south edge of the proposed site.

2.6 Construction: Disturbance associated with grading and or grubbing will be minimal due to the relative flat nature of the site. Areas requiring improved work surfaces (tower, building(s), maintenance road, utility service and fenced compound) may be totally disturbed during construction. When possible, construction equipment and service vehicles will drive over/around vegetation and avoid damaging any perennial plants.

2.7 Reclamation Efforts: Whenever possible, plants will be salvaged, stockpiled and placed back within the right-of-way after construction activities are completed.

2.8 Operation: Once operational it is anticipated that onsite inspections of the site would occur at a minimum monthly. All maintenance or repairs would be completed as needed and would be confined mainly to the tower and or equipment building(s) within the fenced enclosure and accessed from the maintenance road.

2.9 Future Land Use(s): The proposed site is situated approximately 2 miles west of private property (Crystal Springs) and 5.5 miles south of the Township of Hiko on State Highway 318. The lands south and west are high desert chaparral. The lands surrounding the proposed site consist mainly of crazing and farming with private and public ownership. Therefore, it is likely that the lands north and east of the site will be developed to some extent in the future.

3) Visual Resources Management Objective (VRM)

As identified in the Department of Interior, Bureau of Land Management Visual Resource Contrast Rating manual 8431, Appendix 2 – VRM Class Objectives, Class III Objectives states "The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basis elements found in the predominant natural features of the characteristic landscape."

4) Key Observation Points (KOP)

Based on ground reconnaissance the closest observation points were along State Highway 375 (Figure 3). Two KOP's were established, one mile east and west, and each selected to avoid locations that were on the periphery or outside the straight ahead view of drivers and passengers of vehicles.

KOP 1: This location is approximately 3,880 feet in elevation and one mile east of proposed site (Figure 4).
KOP 2: This location is approximately 4,195 feet in elevation and one mile west of proposed site (Figure 5).

Both observation points offer a relatively unobstructed view of the proposed tower and equipment shelter.

5) Visual Simulation

The following pictures (Figures 6 and 7) provide a visual representation of the current conditions at the proposed site and visual simulation of the proposed site.

6) Contrast Rating

Information for the contrast rating was compiled from utilization of Visual Contrast Rating Worksheet Form 8400-4 and prepared for each KOP (Attachment A).

Currently, the linear and banding nature of the highway corridor is a dominate presence from both east and west bound views along State Highway 375. The black roadway, yellow and white striping, cleared highway shoulder, highway signs and other disturbed areas along the highway periphery, provide contrast to the natural characteristics in the area. Currently the closest development that encroaches on and obscures the natural landscape is approximately 2 miles east of site (Crystal Springs) US Highway 93 and State Highway 375 and private residence along State Highway 318. Between the proposed project area and the interchange mentioned above, the visual contrasts are natural excepting the presence of a power line running parallel too and crossing the highway. There are numerous dirt trails leading away from the highway creating a banding effect and harsh lines with moderate color changes.

Visual impacts associated with the proposed project are anticipated to be long term in nature due to the fact that the site is in a remote area and little to no private lands are available for development and its unknown if the surrounding public lands will be placed on a land disposal program with-in the life cycle of the project. It is anticipated that the project will be the only development within the area for an extended period of time.

The following section presents the analysis, for each KOP and the potential impacts the proposed project may have on the Visual Resource Features (landscape, vegetation and structures) in three categories (foreground, mid-ground and background) which correspond to their proximity to the KOP and the horizon. Foreground was defined as extending from the KOP to approximately

half way to the project site, the background as the mountains and sky and the mid-ground as the area in between.

6.1) KOP 1 / KOP2

Due to the similarity of two viewing points and short distances between them (approximately 2 miles) the analyses were combined for KOP1 and KOP2. Where differences are determined they are noted as to the viewing point.

6.1.1 Landscape:

Foreground: The proposed project is not a component of the foreground and is not expected to have any impact. The line contrast element was identified due to the open expanse and gentle slope of the land. The banding affect created by State Highway 375 is obvious and provides a bold contrast to the surrounding undisturbed areas.

Mid-Ground: The proposed project (Tower, Shelter, and Fencing) is a component of the mid-ground and expected to have some impact on the landscape. The level landscape from the highway to the project site will have an unobstructed view of the proposed site and all structures above ground level. Therefore, the tower and shelter components of the site should be viewable and are expected to have a moderate impact on the texture elements. Color element impacts are expected to be weak, since the silver/grey color of the tower will blend with the tan to gray hues present in the mid-ground. The tall threadlike nature of the tower is expected to provide a weak contrast to the lack of topographic relief and gentle slopes which are present in the mid-ground. Due to the existing banding effect created by the road-way, transmission line, fencing and dirt roads, as well as, the distance from the KOP's, it is unlikely that the casual viewer will be immediately attracted to the tower, but the tower will be visible from the KOP's. A temporary contrast rating of moderate was determined to be appropriate for the form element.

Background: The proposed tower is not a component of the back-ground but the line, form and color elements extend into the landscape. The vertical angular nature of the tower will be silhouetted against the mountains in the background at KOP1, and should extend into the mountain and sky interface, this silhouetting effect will also be present at KOP2. The silver/gray color of the tower will contrast against the tan/dark gray/lava-black colors present in the background. These visual components provide an obvious contrast. However, due to the threadlike nature of the tower and the background not being obscured, the contrast rating was determined to be moderate for line, form and color elements.

6.1.2 Vegetation

Foreground: The proposed tower is not a component of the foreground and therefore is not expected to have any impact. The tan to pastel green colors and short vegetation do not contribute to any of the contrast elements.

Mid-Ground: The disbursed, tan to pastel green colors, and compact vegetation do not contribute to any of the contrast elements. The visible portion of the tower does not disrupt the vegetation component of the visual landscape.

Background: No vegetation is visible.

6.1.3 Structures

Foreground: The proposed tower is not a component of the foreground and is not expected to have an impact. The transmission line and highway are present in the foreground, no other structures are present.

Mid-Ground: As the tower is an engineered component and unlike any natural feature, some degree of contrast is expected. It is anticipated due to the level nature of the proposed site, that all the components (tower, shelter, fencing and electrical service line) will be visible from State Highway 375 but peripheral to the focal affect of the highway. Therefore, a temporary contrast rating of moderate was determined to be appropriate for form and line and weak for color and texture.

Background: The proposed tower is not a component of the background but the tower silhouette is expected to have some impact on the form, line and color elements. Due to the distances to the background and proportionate size of the tower, the form, line and color element were determined to be weak in nature. There are no other structures present.

7.1) Mitigation Measures

The following measures should be implemented to reduce any potential impacts:

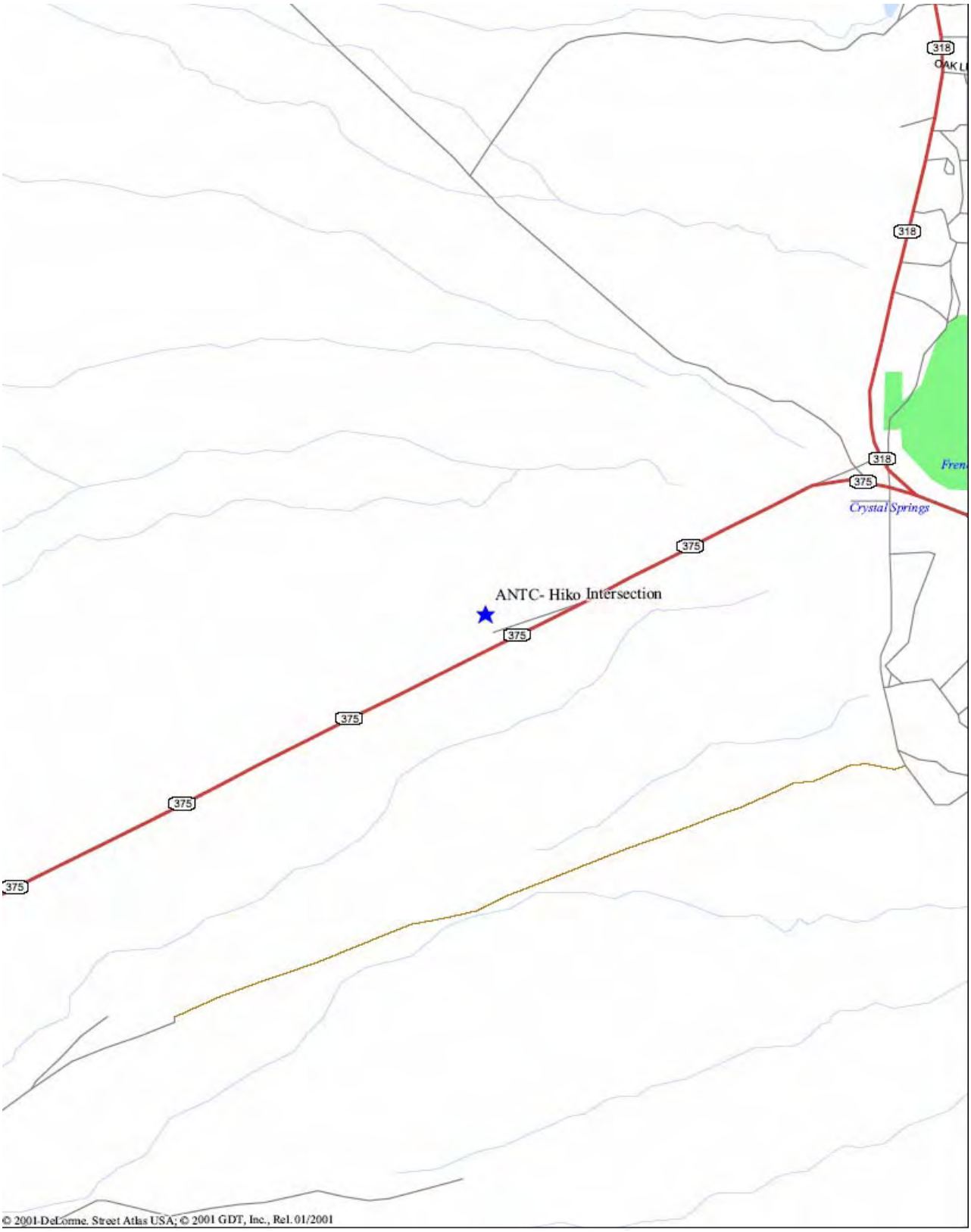
1. **Tower should be grey/silver in color to blend with surrounding landscape.**
2. **Minimize new surface disturbances to avoid large open areas which contrast to the undisturbed areas.**
3. **Equipment buildings should be tan to medium brown in color to blend with mid-ground and background colors.**

8.1) Findings/Conclusions

These findings are based on site reconnaissance, visual simulation, visual comparison of existing sites with similar characteristics, visual contrast analysis and would meet the management objectives for a Class III VRM area.

The proposed communication facility consists of a 100’ x 100’ fenced compound containing a tower, equipment building and utility pedestal. The site is accessed by exiting State Highway 375 to a dirt road and sits in a horizontal position to the viewer.

The analysis of the findings did not identify any of the contrast elements as being stronger than a moderate rating. However, it is likely that the strong contrast and dividing nature of State Highway 375 in the foreground and mid-ground, the ever-present transmission line and the strong contrast associated with the mountains in the background of both KOP's, will attract more attention from the viewer than the proposed communication facility. The limited impacts will be long term in duration but could be lessened by the development of the land adjacent to the project should the private or public lands be made available for development.


318
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Crystal Springs
ANTC- Hiko Intersection
© 2001-DeLorme. Street Atlas USA; © 2001 GDT, Inc., Rel. 01/2001

Figure 1

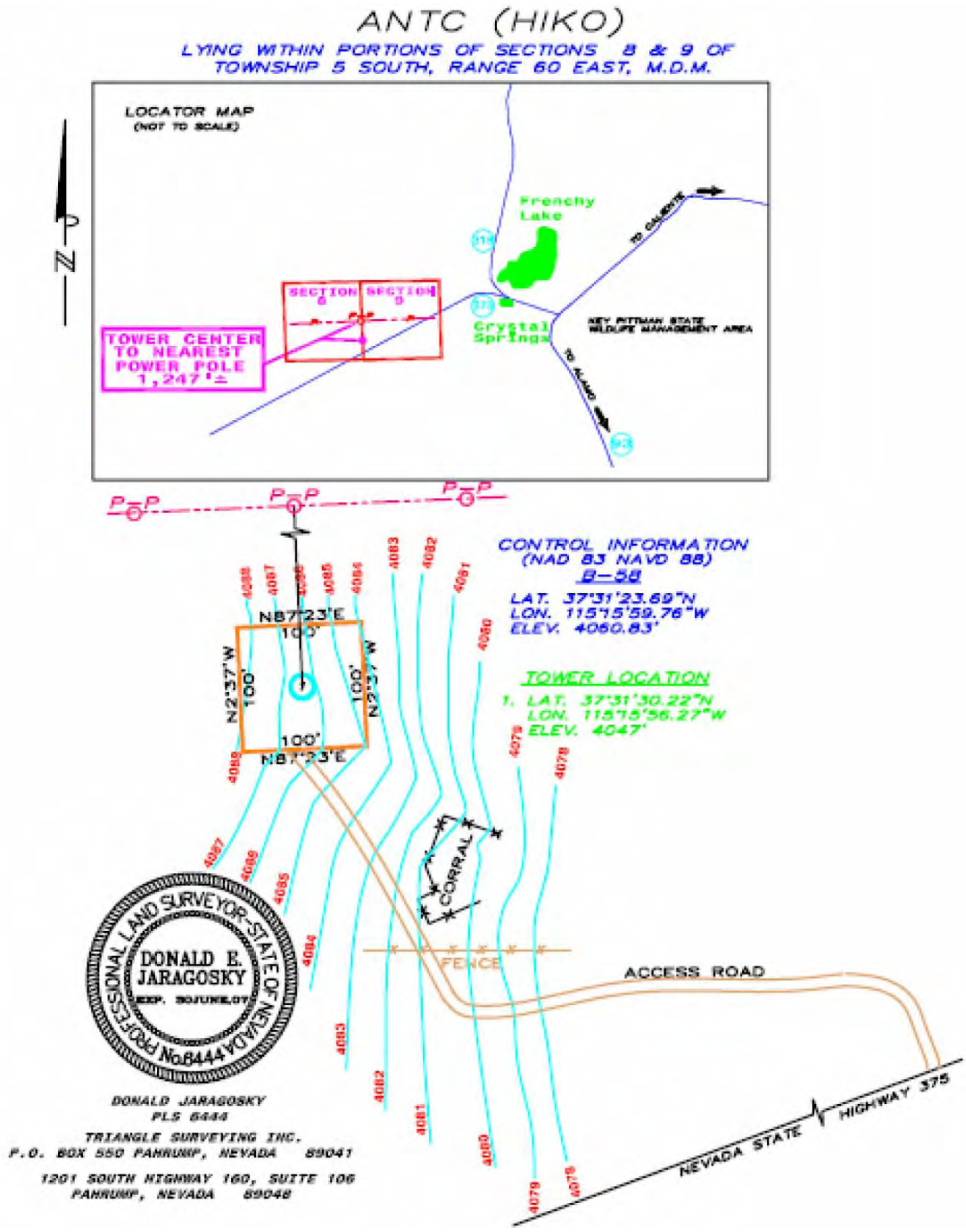
ANTC (HIKO)
LYING WITHIN PORTIONS OF SECTIONS 8 & 9 OF
TOWNSHIP 5 SOUTH, RANGE 60 EAST, M.D.M.
LOCATOR MAP
(NOT TO SCALE)
N
Frenchy Lake
TO CALIENTE
SECTION 8
SECTION 9
Crystal Springs
KEY PITTMAN STATE WILDLIFE MANAGEMENT AREA
TO ALAMO
TOWER CENTER TO NEAREST POWER POLE 1,247'±
P.O.P
CONTROL INFORMATION
(NAD 83 NAVD 88)
B-58
LAT. 37°31'23.69"N
LON. 115°15'59.76"W
ELEV. 4060.83'
TOWER LOCATION
1. LAT. 37°31'30.22"N
LON. 115°15'56.27"W
ELEV. 4047'
N87°23'E
100'
N2°37'W
100'
N87°23'E
100'
CORRAL
FENCE
ACCESS ROAD
NEVADA STATE HIGHWAY 375
PROFESSIONAL LAND SURVEYOR-STATE OF NEVADA No.6444
DONALD E. JARAGOSKY
EXP. 30JUNE,07
DONALD JARAGOSKY
PLS 6444
TRIANGLE SURVEYING INC.
P.O. BOX 550 PAHRUMP, NEVADA 89041
1201 SOUTH HIGHWAY 160, SUITE 106
PAHRUMP, NEVADA 89048

Figure 2

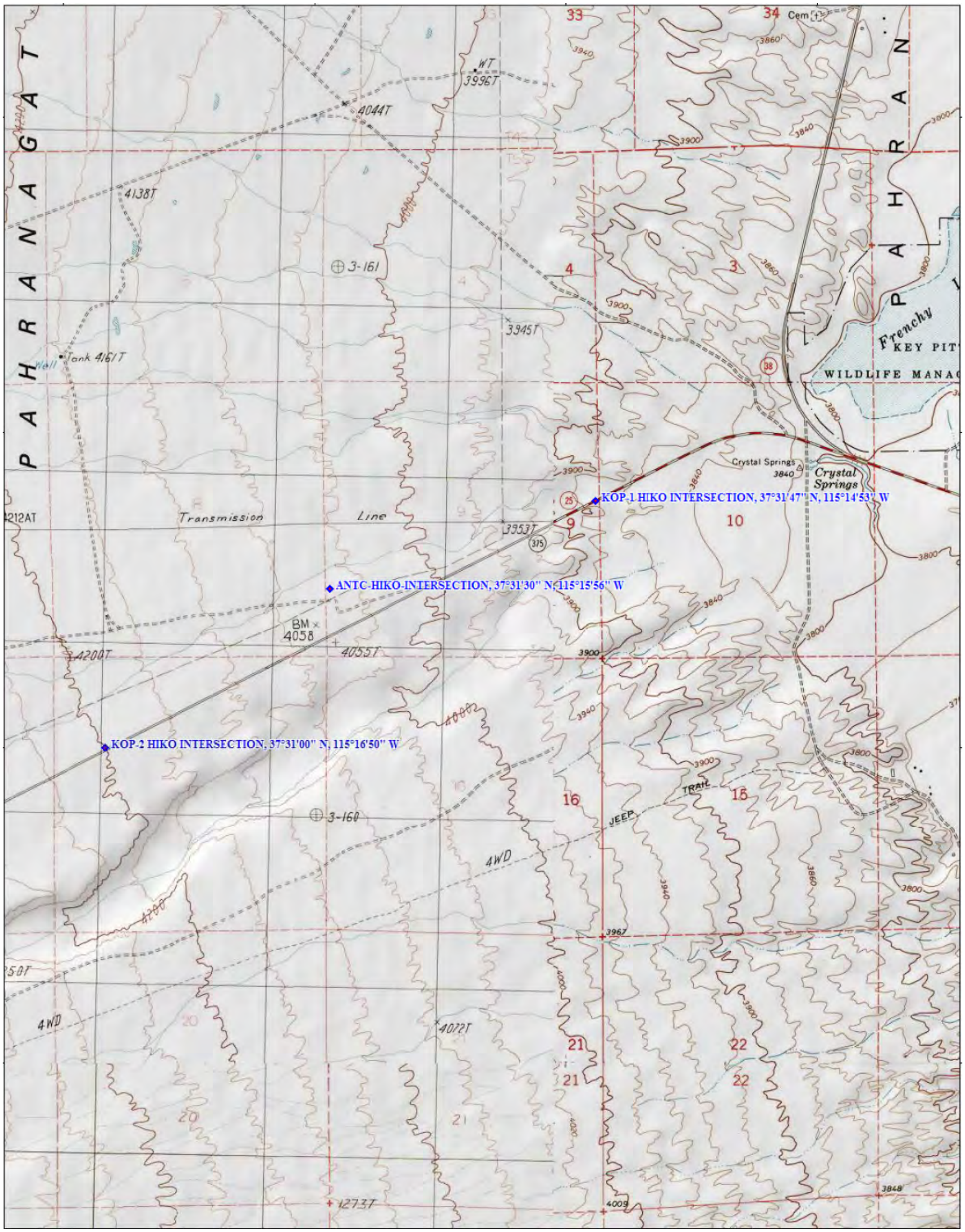
KOP-1 HIKO INTERSECTION, 37°31'47" N, 115°14'53" W
ANTC-HIKO-INTERSECTION, 37°31'30" N, 115°15'56" W
KOP-2 HIKO INTERSECTION, 37°31'00" N, 115°16'50" W
PAHRANAGAT
Transmission Line
Crystal Springs
Frenchy
WILDLIFE MANA
JEEP TRAIL
4WD
BM 4058

Figure 3

Figure 4

Key Observation Point 1. This photograph represents the current visual landscape

Figure 5

Key Observation Point 2. This photograph represents the current visual landscape

Figure 6

This photograph represents the current visual landscape

Figure 7

This photographic simulation represents what the visual landscape may look like following the completion of the project without the placement of buildings

The follow six pictures represent what in an actual setting the tower facility would look like on flat land. The pictures are a communication facility built north of Tonopah, Nevada. As can be seen the tower fades from sight fairly quickly.

Tower in the picture above is approximately 800 feet away.

Tower in picture above is approximately 2 tenths of mile away.

Tower in picture above is approximately 4/10 of mile away

Tower in picture above is approximately ½ mile away.

Tower above is approximately 6/10 mile away.

Tower in picture above is approximately 1 mile away.